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COMMISSION ON MILK STANDARDS.

**SECOND REPORT¹ OF THE COMMISSION ON MILK STANDARDS APPOINTED BY THE
NEW YORK MILK COMMITTEE.**

INTRODUCTION.

PERSONNEL.

The New York Milk Committee, which is a voluntary organization working in the interests of improving the milk supply of New York City decided, in March, 1911, to appoint a commission on milk standards. The men who compose the commission are as follows:

Dr. W. A. Evans, professor preventive medicine, Northwestern University; health editor, Chicago Tribune, Chicago, Ill., chairman.

Dr. B. L. Arms, assistant, department biology and public health, Massachusetts Institute Technology, Boston, Mass.

Dr. John F. Anderson, Director Hygienic Laboratory, United States Public Health Service, Washington, D. C., vice chairman.

Prof. H. W. Conn, director bacteriological laboratory, Connecticut State Board of Health; department of biology, Wesleyan University, Middletown, Conn.

Dr. E. C. Levy, health officer, Richmond, Va.

Dr. A. D. Melvin, Chief Bureau of Animal Industry, United States Department of Agriculture, Washington, D. C.

Dr. William H. Park, director of laboratories, Department of Health of New York City; professor of bacteriology and hygiene, New York University, New York City.

Mr. Raymond A. Pearson, president State College of Agriculture, Ames, Iowa.

Dr. M. P. Ravenel, director hygienic laboratory, University of Wisconsin, Madison, Wis.

Prof. M. J. Rosenau, department of hygiene and preventive medicine, Harvard Medical School, Boston, Mass.

Mr. Chester H. Wells, health officer, Montclair, N. J.

Prof. Henry C. Sherman, department of chemistry, Columbia University, New York City.

Dr. L. L. Van Slyke, department of chemistry, New York Agricultural Experiment Station, Geneva, N. Y.

Dr. Charles E. North, consulting sanitarian; member New York Milk Committee, New York, secretary.

Dr. J. N. Hurty, secretary State board of health, Indianapolis, Ind.

Dr. Joseph S. Neff, director Department Public Health and Charities, Philadelphia, Pa.

Dr. John S. Fulton, director State department of health, Baltimore, Md.

¹ Containing resolutions adopted at the meeting in Richmond, Va., May 2-3, 1913.

ORIGIN AND ORGANIZATION.

The appointment of this commission was the direct result of the observation of the New York Milk Committee that there was great incompleteness and lack of uniformity in the milk standards, milk ordinances, and rules and regulations of public health authorities throughout the country for the control of public milk supplies. There was a need that health officers be furnished conclusions drawn from large experience and mature judgment and that ordinances should be as free from erroneous positions and as uniform as possible.

A special committee of the New York Milk Committee was appointed to consider names of more than 200 men of prominence in medicine, sanitation, public health, and laboratory work, particularly those recognized as authorities on the milk question. Since regulations are based on standards and standards are based chiefly on laboratory analyses, the subcommittee selected 20 names of men distinguished for their knowledge of the bacteriological and chemical examination of milk and for the enforcement of standards based on such laboratory examinations. Two of those chosen declined to serve and another resigned after the first meeting, so that there were 17 members who have taken an active part in the work of the commission.

PURPOSES.

While this commission was created by and its expenses were borne by the New York Milk Committee, it has not been the intention of that committee that the commission should have the New York City milk problem solely in mind. It was desired that the commission should make recommendations that might be adopted by any city or town in the country.

MEETINGS.

The first meeting of the commission was held in the New York Academy of Medicine on May 22, 1911. The chief work of that meeting consisted in a general discussion of the scope of the commission's purpose and the appointment of a number of standing committees to which the several divisions of the work were assigned. The subjects included bacteriological standards, chemical standards, grades and classes of milk, standard ordinances, laws, and licenses, and new questions.

The second meeting of the commission was held at the New York Academy of Medicine on October 5 and 6, 1911, at which time the reports of the standing committees were received and modified, and the major part of them tentatively adopted. Special committees were appointed at this time to consider certain specific matters which were presented and final action on all matters was deferred until the third and final meeting.

The third meeting of the commission was held in Homer, N. Y., on January 25, and at the New York Academy of Medicine, January 26 and 27, 1912. The commission visited Homer in order that the members might inspect the central station and the dairy farms of the New York Dairy Demonstration Co. as a means of helping them to form a correct judgment of the relative value to be given to methods and equipment in the rules and regulations that they might recommend.

At this meeting it was voted to publish the first report of the commission, with an understanding that one year later the commission would meet for the purpose of reconsidering this report and modifying it in such manner as deemed advisable. In consonance with this resolution the first report was submitted to the Public Health Service and was published by that Service in the Public Health Reports, Volume XXVII, No. 19, May 10, 1912; 70,000 copies were distributed.

The fourth meeting was held in Chicago, October 29 and 30, 1912, at the time of the National Dairy Show. At this meeting the commission attended the annual convention of the International Milk Dealers' Association and took part in a discussion of classification of milk and milk standards. The largest milk dealers of the United States and Canada were present.

The fifth meeting of the commission was held in Richmond, Va., on May 2 and 3, 1913, at the Hotel Jefferson. The purpose of the commission in visiting Richmond was to inspect the dairies supplying milk to a city of moderate size, surrounded by farms which have been raised to a condition of sanitary excellence.

It was resolved at the fifth meeting to publish an amended report which would include certain new matters and from which some of the material in the first report would be eliminated. The commission voted to preface its report by a preamble of explanation showing the reasons for the commission's action on the matters in the report.

PREAMBLE.

NEED OF MILK CONTROL.

Proper milk standards, while they are essential to efficient milk control by public health authorities and have as their object the protection of the milk consumer, are also necessary for the ultimate well-being of the milk industry itself. Public confidence is an asset of the highest value in the milk business. The milk producer is interested in proper standards for milk, since these contribute to the control of bovine tuberculosis and other cattle diseases and distinguish between the good producer and the bad producer. The milk dealer is immediately classified by milk standards, either into a seller

of first-class milk or a seller of second-class milk, and such distinction gives to the seller of first-class milk the commercial rewards which he deserves, while it inflicts just penalties on the seller of second-class milk. For milk consumers, the setting of definite standards accompanied by proper labeling makes it possible to know the character of the milk which is purchased and to distinguish good milk from bad milk. In the matter of public health administration, standards are absolutely necessary to furnish definitions around which the rules and regulations of city health departments can be drawn, and the milk supply efficiently controlled.

PUBLIC HEALTH AUTHORITIES.

While public health authorities must necessarily see that the source of supply and the chemical composition should correspond with established definitions of milk as a food, their most important duty is to prevent the transmission of disease through milk. This means the control of infantile diarrhea, typhoid fever, tuberculosis, diphtheria, scarlet fever, septic throat infections, and other infectious diseases in so far as they are carried by milk.

SEPTIC SORE THROAT.

Septic sore throat deserves special mention because of the frequency in recent years with which outbreaks of this disease have been traced to milk supplies. The suggestion has been made that the infection of the milk is due to udder infection of the cow and on the other hand it has been suggested that it is due to contact with infected persons. The uncertainty can not be dispelled until cases of septic sore throat are regularly reported and tabulated by public health authorities. The commission therefore recommends that public health authorities make septic sore throat a reportable disease.

ECONOMIC PROBLEM.

The commission recognizes the magnitude of the milk industry, and that the improvement of milk supplies is primarily an economic problem. The success achieved by the experiment in milk production, which has been carried out on a very large scale by the New York Dairy Demonstration Co., is an illustration of the fact that an extra price or premium paid to the producer for cleanliness and care will bring results far more quickly and certainly than instructions or official inspection. But while the basic problem is economic, and must eventually be solved by commerce, public health authorities must show the way and must establish standards and regulations in the interest of consumers, the value of which even the consumers themselves often fail to appreciate.

LEGAL REQUIREMENTS.

A prime requisite of effectiveness is that local milk laws shall not exceed sanitary limitations. The commission has not entered into a discussion of fundamental State laws, but it recommends that State laws be amended wherever necessary in order that every municipality may have the legal right to adopt whatever ordinances it sees fit for the improvement of the milk supply. The commission advocates that local health laws be carefully drawn with regard to their legality under the general laws of the localities to which they apply, since a decision against a milk law in one locality is liable to be used as a precedent against milk laws elsewhere.

STANDARD RULES AND REGULATIONS.

The commission has drawn up a set of standard rules and regulations for the control of milk. These are the result of a study of the printed rules and regulations of the cities of the United States and of foreign countries and represent an immense amount of work on the part of the special committee of the commission to which the task was assigned. Some communities are in a position to adopt all of these rules and regulations at the present time, while other communities will be obliged to adopt a few rules at a time as public sentiment and local conditions warrant. It is realized that some of the rules may have to be modified to meet local conditions. It seems wise to the commission to divide the regulations into two parts: First, requirements, under which head are set down those provisions which are so fundamentally necessary that no community is justified in compromising on them; second, recommendations, under which head are set down provisions which are necessary for a good milk supply, but on which there can be a certain amount of latitude for compromise by those communities in which public sentiment is not ready to support more than a moderate degree of protection of human life.

ADMINISTRATIVE EQUIPMENT.

Another prime requisite is that the administrative departments shall be adequately equipped with men, money, and laboratory facilities. In smaller communities cooperation between local boards of health to the extent of exchanging reports would eliminate much duplication. Where a community can not maintain a laboratory it can enter into laboratory arrangements with other communities, and several can combine in the use of a common laboratory. Much of the expense of tuberculin testing can be borne by the National and State Governments. The commission is of the opinion that results can not be expected from laws where there is not sufficient appropriation and

where there is no machinery for their enforcement. On this subject the commission passed a resolution as follows:

Whereas the appropriations generally made for the purposes of carrying on laboratory analyses of milk are now in most cases entirely inadequate: Therefore be it

Resolved, That this commission recommends for the consideration of the authorities concerned an appropriation of funds commensurate with the importance of laboratory methods, which are of paramount importance in the hygienic control of the milk supply.

CLASSIFICATION OF MILKS.

There is no escape from the conclusion that milk must be graded and sold on grade, just as wheat, corn, cotton, beef, and other products are graded. The milk merchant must judge of the food value and also of the sanitary character of the commodity in which he deals. The high-grade product must get a better price than at present. The low-grade product must bring less. In separating milk into grades and classes the commission has endeavored to make its classification as simple as possible and at the same time to distinguish between milks which are essentially different in sanitary character.

In general two great classes of milk are recognized, namely, raw milk and pasteurized milk. Under these general classes there are different grades, as indicated in the report of the committee on classification.

REPORT.

PASTEURIZATION.

While the process of pasteurization is a matter which has attracted a great deal of attention in recent years, the commission has not entered into any discussion of its merits or demerits, but has given it recognition in its classification as a process necessary for the treatment of milk which is not otherwise protected against infection.

The commission thinks that pasteurization is necessary for all milk at all times, excepting grade A, raw milk. The majority of the commissioners voted in favor of the pasteurization of all milk, including grade A, raw milk. Since this was not unanimous the commission recommends that the pasteurization of grade A, raw milk, be optional.

The process of pasteurization should be under official supervision. The supervision should consist of a personal inspection by the milk inspector; the inspections shall be as frequent as possible. Automatic temperature regulators and recording thermometers should be required and the efficiency of the process frequently determined by laboratory testing.

PASTEURIZING TEMPERATURES.

The destruction of the chemical constituents of milk by heat occurs at higher temperatures than those necessary for the destruction of the bacteria of infectious diseases transmissible by milk. (See chart in appendix.)

The commission passed a resolution regarding the temperature of pasteurization as follows:

That pasteurization of milk should be between the limits of 140° F. and 155° F. At 140° F. the minimum exposure should be 20 minutes. For every degree above 140° F. the time may be reduced by 1 minute. In no case should the exposure be for less than 5 minutes.

In order to allow a margin of safety under commercial conditions the commission recommends that the minimum temperature during the period of holding should be made 145° F. and the holding time 30 minutes. Pasteurization in bulk when properly carried out has proven satisfactory, but pasteurization in the final container is preferable.

It is the sense of the commission that pasteurization in the final container should be encouraged.

LABELING AND DATING OF MILK.

The commission voted that all milk should be labeled and marked with the grade in which it is to be sold. In dating milk uniform methods should be adopted for all grades of both raw milk and pasteurized milk, both using the day of the week or both using the day of the month. All milk should be dated uniformly with the date of delivery to the consumer. Raw milk should not be dated with the date of production while pasteurized milk is dated with the date of pasteurization, since this places certified milk at a disadvantage by making it possible for pasteurized milk of a lower grade to carry a later date. The stamping on the label of the day of the week is sufficient for dating.

BACTERIA.

The subject of bacteria in milk received more attention than any other matter brought before the commission. The commission recognizes that bacteria in milk in the majority of instances indicate dirt, or lack of refrigeration, or age, while in the minority of instances the bacteria of disease may be present. The routine laboratory methods for examining milk have as their purpose only the control over dirt, refrigeration, and age, and it is a rare thing for a laboratory to undertake the examination of milk for the bacteria of disease because of the extreme difficulties in detecting them. The more efficacious method of protecting milk from infection by the bacteria of human contagion is by medical, veterinary, and sanitary inspection, and by

pasteurization. Milk with a high bacteria count is not necessarily harmful, but when used as a food, particularly for children, is a hazard too great to be warranted. Milk with a high bacteria count, therefore, should be condemned. Milks with small numbers of bacteria are presumed to be wholesome, unless there is reasonable ground for suspecting that they have been exposed to contagion.

BACTERIAL STANDARDS.

The commission recognizes the difficulty in interpreting bacteria counts. At times misleading conclusions have been drawn from such counts. In establishing the bacterial standards for a city it is always necessary to take into consideration the necessary age of the milk and in lesser measure the distance hauled and methods employed in its hauling. It will always be possible for a community which consumes milk produced on its own premises, or within 12 hours of its production, to insist upon and maintain a lower bacterial standard than can one where the milk is hauled many miles into town in a wagon, to be consumed within 24 hours after it is produced. In like manner this second type of city can always maintain a lower bacterial standard than a city where the general milk supply is hauled by railroad long distances and is several days old when consumed. In drawing conclusions as to the relative efficacy of milk control in cities comparisons must be made between cities of the same class.

The commission deems it of the utmost importance that some standard method should be adopted for estimating and comparing the bacterial character of milks, since by this means only is it possible to grade and classify milks and to enforce bacterial standards. There is much diversity of opinion as to the best method of valuing bacteria counts. The average of a series gives results which are misleading about as frequently as otherwise. In the average a single high figure may unduly overbalance a large number of exceedingly low counts. There are objections to the use of the "median" or middle number when the counts are arranged in order of size, for the reason that the middle figure does not distinguish between two groups in one of which there may be some very high counts above the median and in the other of which there are none. The method of dividing results into groups as recommended by the American Public Health Association, while a step in the right direction, is cumbersome and does not clearly indicate whether or not a milk conforms to a given bacterial standard.

The commission passed a resolution at its last meeting regarding the number of bacterial tests necessary to determine the grade into which a milk falls, as follows:

That the grade into which a milk falls shall be determined bacteriologically by at least five consecutive bacteria counts taken over a period of not less than one week nor more than one month, and at least 80 per cent (four out of five) must fall below the limit set for the grade for which the classification is desired.

LABORATORY EXAMINATIONS FOR BACTERIA.

On the subject of laboratory examinations of milk for bacteria the commission passed the following resolutions:

1. That the interests of public health demand that the control of milk supplies, both as to production and distribution, shall include regular laboratory examinations of milk by bacteriological methods.
2. That among present available routine laboratory methods for determining the sanitary quality of milk the bacteria count occupies first place.
3. That bacteriological standards should be a factor in classifying or grading milks of different degrees of excellence.
4. That in determining the grade or class of a raw milk the specimen taken for bacteriological examination should be of milk as offered for sale.
5. That there should be bacteriological standards for pasteurized milk which should require laboratory examination of samples immediately before pasteurization as well as of milk offered for sale.
6. That the bacteria count of milk indicates its quality and history as it is modified by contamination, handling, dirt, temperature, or age. A high count indicates the necessity of investigation and inspection.
7. That there be adopted as standards for making the bacteria count the standard methods of the American Public Health Association, laboratory section, recommending, however, the following amendments:
 - A. That the culture medium used for testing milk be identical in its composition and reaction with the culture medium used for the testing of water provided in the standard methods of water analyses of the American Public Health Association.
 - B. That incubation of plate cultures be made at 37° C. for 48 hours.

The bacterial standards given in the report are the work of a special committee of bacteriologists who considered all of the bacterial standards now in use. It is believed that the standards suggested are fair and wise and give full consideration to the state of the industry and of public health control. The commission believes that the adoption and enforcement of these bacterial standards will be more effective than any other one thing in improving the sanitary character of public milk supplies. The enforcement of these standards can be carried out only by the regular and frequent laboratory examinations of milks for the numbers of bacteria they may contain.

CHEMICAL STANDARDS.

The chemical standards suggested are the work of a special committee, composed of chemists, which has carefully considered the natural composition of milk and the Federal and State standards already established. The standard of 3.25 per cent fat and 8.5 per cent solids, not fat, here proposed is in accordance with the recommendations of the Association of Official Agricultural Chemists and has been adopted by the United States Department of Agriculture and by a larger number of States than has any other standard. The simplification of the Babcock test makes the determination of fats and solids not fat an easy procedure quickly applied. Such chemical

examinations of milk can be readily adopted and executed by any health-board laboratory at a very moderate expense. It is believed that such chemical standards as are suggested will inflict no real hardship on the milk producers of this country and that the provision regarding substandard milks is a liberal one.

MICROSCOPIC EXAMINATION OF MILK.

Because of studies which have been made during the past year the commission thinks it wise to omit temporarily any definite statement on the subject of microscopical examination of milk, and the determination of pus and bacteria by sedimentation methods, until further studies have been made. A special subcommittee has been appointed for this purpose which will make studies during the present year and the commission will take action on this matter at one of its later meetings.

MISLABELING.

The commission resolved that the sale of milk which is mislabeled or misbranded shall be punished by suitable penalties.

PUBLICITY.

The commission fully considered the matter of the publication of laboratory examinations of milk by city and town health authorities. When proper standards and regulations are established and adequate facilities furnished for laboratory work, it is believed that the laboratory tests will give an index of the character of the milk delivered to the public by milk sellers which is entirely fair and impartial. There can be no objection to publicity under such circumstances. It is an advantage to the seller of high-grade milk. It is an advantage to the consumer who desires to select a high-grade milk. It has much educational value both to producer and consumer. Therefore the commission recommends "that the reports of laboratory analyses of milk made by departments of health be regularly published."

MEDICAL INSPECTION.

It is the sense of the commission that the medical inspection of dairy employees should be emphasized in all ways possible.

MILK DEALER'S LICENSE.

The commission resolved that a dealer shall be required to have a permit or license to sell any grade or class of milk and to use a label for such class or grade. Such permit or license shall be revoked and the use of the label forbidden when the local health authorities shall determine that the milk is not in the class or grade designated.

DESIGNATION OF GRADE.

The commission resolved that the grade of milk shall be designated by letter. It is the sense of the commission that the essential part is the lettering and that all other words on the label are explanatory.

In addition to the letters of the alphabet, used on caps or labels, the use of other terms may be permitted so long as such terms are not the cause of deception.

Caps and labels shall state whether milk is raw or pasteurized. The letter designating the grade to which milk belongs shall be conspicuously displayed on the caps of bottles or the labels on cans.

CLASSIFICATION OF MILK.

It was resolved that the classification of milk contained in the first report of the commission be amended as follows:

Milk shall be divided into three grades, which shall be the same for both large and small cities and towns, and which shall be designated by the first three letters of the alphabet. The requirements shall be as follows:

GRADE A.

Raw milk.—Milk of this class shall come from cows free from disease as determined by tuberculin tests and physical examinations by a qualified veterinarian, and shall be produced and handled by employees free from disease as determined by medical inspection of a qualified physician, under sanitary conditions such that the bacteria count shall not exceed 100,000 per cubic centimeter at the time of delivery to the consumer. It is recommended that dairies from which this supply is obtained shall score at least 80 on the United States Bureau of Animal Industry score card.

Pasteurized milk.—Milk of this class shall come from cows free from disease as determined by physical examinations by a qualified veterinarian and shall be produced and handled under sanitary conditions such that the bacteria count at no time exceeds 200,000 per cubic centimeter. All milk of this class shall be pasteurized under official supervision, and the bacteria count shall not exceed 10,000 per cubic centimeter at the time of delivery to the consumer. It is recommended that dairies from which this supply is obtained should score 65 on the United States Bureau of Animal Industry score card.

The above represents only the minimum standards under which milk may be classified in grade A. The commission recognizes, however, that there are grades of milk which are produced under unusually good conditions, in especially sanitary dairies, many of which are operated under the supervision of medical associations. Such milks clearly stand at the head of this grade.

GRADE B.

Milk of this class shall come from cows free from disease as determined by physical examinations, of which one each year shall be by a qualified veterinarian, and shall be produced and handled under sanitary conditions such that the bacteria count at no time exceeds 1,000,000 per cubic centimeter. All milk of this class shall be pasteurized under official supervision, and the bacteria count shall not exceed 50,000 per cubic centimeter when delivered to the consumer.

It is recommended that dairies producing grade B milk should be scored and that the health departments or the controlling departments, whatever they may be, strive to bring these scores up as rapidly as possible.

GRADE C.

Milk of this class shall come from cows free from disease as determined by physical examinations and shall include all milk that is produced under conditions such that the bacteria count is in excess of 1,000,000 per cubic centimeter.

All milk of this class shall be pasteurized, or heated to a higher temperature, and shall contain less than 50,000 bacteria per cubic centimeter when delivered to the customer. It is recommended that this milk be used for cooking or manufacturing purposes only.

Whenever any large city or community finds it necessary, on account of the length of haul or other peculiar conditions, to allow the sale of grade C milk, its sale shall be surrounded by safeguards such as to insure the restriction of its use to cooking and manufacturing purposes.

CLASSIFICATION OF CREAM.

Cream should be classified in the same grades as milk, in accordance with the requirements for the grades of milk, excepting the bacterial standards which in 20 per cent cream shall not exceed five times the bacterial standard allowed in the grade of milk.

Cream containing other percentages of fat shall be allowed a modification of this required bacterial standard in proportion to the change in fat.

CHEMICAL STANDARDS.

Cow's milk.—Standard milk should contain not less than 8.5 per cent of milk solids not fat and not less than 3.25 per cent of milk fat.

Skim milk.—Standard skim milk should contain not less than 8.75 per cent of milk solids.

Cream.—Standard cream contains not less than 18 per cent of milk fat and is free from all constituents foreign to normal milk. The percentage of milk fat in cream over or under that standard should be stated on the label.

Buttermilk.—Buttermilk is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. Standard buttermilk contains not less than 8.5 per cent of milk solids. When milk is skimmed, soured, or treated so as to resemble buttermilk, it should be known by some distinctive name.

HOMOGENIZED MILK OR CREAM.

The commission is of the opinion that in the compounding of milk no fats other than milk fats from the milk in process should be used and that no substance foreign to milk should be added to it. The commission is opposed to the use of condensed milk or other materials for the thickening of cream unless the facts are clearly set forth on

the label of the retail package. Regarding the process of homogenizing, the commission resolved as follows:

That homogenized milk or cream should be so marked, stating the percentage of fat that it contains.

ADJUSTED MILKS.

On the question of milks and creams in which the ratio of the fats to the solids not fat has been changed by the addition to or subtraction of cream or milk fat the commission has hesitated to take a position. On the one hand they are in favor of every procedure which will increase the market for good milk and make the most profitable use of every portion of it. On the other, they recognize the sensitiveness of milk, the ease with which it is contaminated, and the difficulty of controlling, standardizing, skimming, homogenizing, souring, etc., so that contaminations do not occur and inferior materials are not used. On this subject the commission passed a resolution presented by a special committee as follows:

Milk in which the ratio of the fats to the solids not fat has been changed by the addition to or subtraction of cream should be labeled "adjusted milk"; the label should show the minimum guaranteed percentage of fat and should comply with the same sanitary or chemical requirements as for milk not so standardized or modified.

REGULATION OF MARKET MILK ON BASIS OF GUARANTEED PERCENTAGE COMPOSITION.

1. Sellers of milk should be permitted choice of one of two systems in handling market milk. Milk can be sold, first, under the regular standard, or, second, under a guaranteed statement of composition.
2. Any normal milk may be sold if its per cent of fat is stated. In case the per cent of fat is not stated, the sale will be regarded as a violation unless the milk contains at least 3.25 per cent of milk fat.
3. As a further protection to consumers, it is desirable that when the guaranty system is used there be also a minimum guaranty of milk solids not fat of not less than 8.5 per cent.
4. Dealers electing to sell milk under the guaranty system should be required to state conspicuously the guaranty on all containers in which such milk is handled by the dealer or delivered to the consumer.
5. The sale of milk on a guaranty system should be by special permission obtained from some proper local authority.

EXTENSION WORK.

The commission indorsed the efforts of the New York Milk Committee to obtain funds for the formation of a bureau of extension work, such bureau to act as a collecting station for information regarding standards and regulations as to milk adopted by cities and towns

in the United States. The bureau should also furnish information to such cities and towns as appeal for aid in the adoption of milk standards and should conduct a constructive program by placing in the field a man who would visit communities interested in establishing milk standards; and it may use the members of the commission on milk standards for carrying on the work of the bureau so far as possible in their own localities.

PREFACE TO APPENDIX.

The commission has confined its report rather closely to the standard requirements for milk. These requirements can not be met unless proper measures are taken. For instance: The milk must be produced from healthy cows in clean surroundings, and must then be promptly chilled and kept cool thereafter. The handling at all points must be done by healthy employees—employees who are not carriers of contagion.

The report of the subcommittees on the methods of production, handling, and distribution, while not properly a part of the report itself, are set forth in the following appendix.

APPENDIX.

Standard Rules for the Production, Handling, and Distribution of Milk.

As a basis for the promulgation of rules and recommendations governing the production, handling, and distribution of milk, it is recognized that we have to deal with two kinds of milk, raw and pasteurized, although there may be several grades of each of these two kinds. In order for any grade to be safe, it is recommended that the regulations herein set forth under the heading "Requirements" should be enforced. The regulations herein set forth under the heading "Recommendations" should be adopted wherever practicable as a means of improving the milk supply above the actual point of safety. (The term "milk" shall be construed to include the fluid derivatives of milk wherever such construction of the term is applicable.)

LICENSES.

REQUIREMENTS.

No person shall engage in the sale, handling, or distribution of milk in ——— until he has obtained a license therefor from the health authorities. This license shall be renewed on or before the 1st day of ——— of each year and may be suspended or revoked at any time for cause.

RECOMMENDATIONS.

The application for the license shall include the following statements:

- (1) Kind of milk to be handled or sold.
- (2) Names of producers with their addresses and permit numbers.
- (3) Names of middlemen with their addresses.
- (4) Names and addresses of all stores, hotels, factories, and restaurants at which milk is delivered.
- (5) A statement of the approximate number of quarts of milk, cream, buttermilk, and skim milk sold per day.
- (6) Source of water supply at farms and bottling plants.
- (7) Permission to inspect all local and out-of-town premises on which milk is produced and handled.
- (8) Agreement to abide by all the provisions of State and local regulations.

PERMITS.

REQUIREMENTS.

No person shall engage in the production of milk for sale in —, nor shall any person engage in the handling of milk for shipment into — until he has obtained a permit therefor from the health authorities. This permit shall be renewed on or before the 1st day of — of each year and may be suspended or revoked at any time for cause.

RAW MILK.

COW STABLES.

REQUIREMENTS.

1. They shall be used for no other purpose than for the keeping of cows, and shall be light, well ventilated, and clean.
2. They shall be ceiled overhead if there is a loft above.
3. The floors shall be tight and sound.
4. The gutters shall be water-tight.

RECOMMENDATIONS.

1. The window area shall be at least 2 square feet per 500 cubic feet of air space and shall be uniformly distributed, if possible. If uniform distribution is impossible, sufficient additional window area must be provided so that all portions of the barn shall be adequately lighted.
2. The amount of air space shall be at least 500 cubic feet per cow, and adequate ventilation besides windows shall be provided.
3. The walls and ceilings shall be whitewashed at least once every six months, unless the construction renders it unnecessary, and shall be kept free from cobwebs and dirt.
4. All manure shall be removed at least twice daily, and disposed of so as not to be a source of danger to the milk either as furnishing a breeding place for flies or otherwise.
5. Horse manure shall not be used in the cow stable for any purpose.

MILK ROOM.**REQUIREMENTS.**

Every milk farm shall be provided with a milk room that is clean, light, and well screened. It shall be used for no other purpose than for the cooling, bottling, and storage of milk and the operations incident thereto.

RECOMMENDATIONS.

1. It shall have no direct connection with any stable or dwelling.
2. The floors shall be of cement or other impervious material, properly graded and drained.
3. It shall be provided with a sterilizer unless the milk is sent to a bottling plant, in which case the cans shall be sterilized at the plant.
4. Cooling and storage tanks shall be drained and cleaned at least twice each week.
5. All drains shall discharge at least 100 feet from any milk house or cow stable.

COWS.**REQUIREMENTS.**

1. A physical examination of all cows shall be made at least once every six months by a veterinarian approved by the health authorities.
2. Every diseased cow shall be removed from the herd at once and no milk from such cows shall be offered for sale.
3. The tuberculin test shall be applied at least once a year by a veterinarian approved by the health authorities.
4. All cows which react shall be removed from the herd at once, and no milk from such cows shall be sold as raw milk.
5. No new cows shall be added to a herd until they have passed a physical examination and the tuberculin test.
6. Cows, especially the udders, shall be clean at the time of milking.
7. No milk that is obtained from a cow within 15 days before or 5 days after parturition, nor any milk that has an unnatural odor or appearance, shall be sold.
8. No unwholesome food shall be used.

RECOMMENDATIONS.

1. Every producer shall allow a veterinarian employed by the health authorities to examine his herd at any time under the penalty of having his supply excluded.
2. Certificates showing the results of all examinations shall be filed with the health authorities within 10 days of such examinations.
3. The tuberculin tests shall be applied at least once every six months by a veterinarian approved by the health authorities, unless on the last previous test no tuberculosis was present in the herd or in the herds from which new cows were obtained, in which event the test may be postponed an additional six months.
4. Charts showing the results of all tuberculin tests shall be filed with the health authorities within 10 days of the date of such test.
5. The udders shall be washed and wiped before milking.

EMPLOYEES.**REQUIREMENTS.**

1. All employees connected in any way with the production and handling of milk shall be personally clean and shall wear clean outer garments.
2. The health authorities shall be notified at once of any communicable disease in any person that is in any way connected with the production or handling of milk, or of the exposure of such person to any communicable disease.
3. Milking shall be done only with dry hands.

RECOMMENDATIONS.

1. Clean suits shall be put on immediately before milking.
2. The hands shall be washed immediately before milking each cow, in order to avoid conveyance of infection to the milk.

UTENSILS.**REQUIREMENTS.**

1. All utensils and apparatus with which milk comes in contact shall be thoroughly washed and sterilized, and no milk utensil or apparatus shall be used for any other purpose than that for which it was designed.
2. The owner's name, license number, or other identification mark, the nature of which shall be made known to the health authorities, shall appear in a conspicuous place on every milk container.
3. No bottle or can shall be removed from a house in which there is, or in which there has recently been, a case of communicable disease until permission in writing has been granted by the health authorities.
4. All metal containers and piping shall be in good condition at all times. All piping shall be sanitary milk piping, in couples short enough to be taken apart and cleaned with a brush.
5. Small-top milking pails shall be used.

RECOMMENDATIONS.

1. All cans and bottles shall be cleaned as soon as possible after being emptied.
2. Every conveyance used for the transportation or delivery of milk, public carriers excepted, shall bear the owner's name, milk-license number, and business address in uncondensed gothic characters at least 2 inches in height.

MILK.

REQUIREMENTS.

1. It shall not be strained in the cow stable, but shall be removed to the milk room as soon as it is drawn from the cow.

2. It shall be cooled to 50° F. or below within two hours after it is drawn from the cow and it shall be kept cold until it is delivered to the consumer.

3. It shall not be adulterated by the addition to or the subtraction of any substance or compound, except for the production of the fluid derivatives allowed by law.

4. It shall not be tested by taste at any bottling plant, milk house, or other place in any way that may render it liable to contamination.

5. It shall be bottled only in a milk room or bottling plant for which a license or permit has been issued.

6. It shall be delivered in bottles, or single service containers, with the exception that 20 quarts or more may be delivered in bulk in the following cases:

(a) To establishments in which milk is to be consumed or used on the premises.

(b) To infant-feeding stations that are under competent medical supervision.

7. It shall not be stored in or sold from a living room or from any other place which might render it liable to contamination.

RECOMMENDATIONS.

1. It shall be cooled to 50° F. or below immediately after milking and shall be kept at or below that temperature until it is delivered to the consumer.

2. It shall contain no visible foreign material.

3. It shall be labeled with the date of production.

RECEIVING STATIONS AND BOTTLING PLANTS.

REQUIREMENTS.

1. They shall be clean, well screened, and lighted, and shall be used for no other purpose than the proper handling of milk and the operations incident thereto, and shall be open to inspection by the health authorities at any time.

2. They shall have smooth, impervious floors, properly graded and drained.

3. They shall be equipped with hot and cold water and steam.

4. Ample provision shall be made for steam sterilization of all utensils, and no empty milk containers shall be sent out until after such sterilization.

5. All utensils, piping, and tanks shall be kept clean and shall be sterilized daily.

RECOMMENDATIONS.

1. Containers and utensils shall not be washed in the same room in which milk is handled.

STORES.**REQUIREMENTS.**

1. All stores in which milk is handled shall be provided with a suitable room or compartment in which the milk shall be kept. Said compartment shall be clean and shall be so arranged that the milk will not be liable to contamination of any kind.
2. Milk shall be kept at a temperature not exceeding 50° F.

RECOMMENDATIONS.

1. Milk to be consumed off the premises may be sold from stores only in the original unopened package.

GENERAL REGULATIONS.**REQUIREMENTS.**

1. The United States Bureau of Animal Industry score card shall be used, and it is recommended that dairies from which milk is to be sold in a raw state shall score at least 80 points.
2. Every place where milk is produced or handled and every conveyance used for the transportation of milk shall be clean.
3. All water supplies shall be from uncontaminated sources and from sources not liable to become contaminated.
4. The license or permit shall be kept posted in a conspicuous place in every establishment for the operation of which a milk license or permit is required.
5. No milk license or permit shall at any time be used by any person other than the one to whom it was granted.
6. No place for the operation of which a license or permit is granted shall be located within 100 feet of a privy or other possible source of contamination, nor shall it contain or open into a room which contains a water-closet.
7. No skim milk or buttermilk shall be stored in or sold from cans or other containers unless such containers are of a distinctive color and permanently and conspicuously labeled "skim milk" or "buttermilk," as the case may be.
8. No container shall be used for any other purpose than that for which it is labeled.

RECOMMENDATIONS.

1. Ice used for cooling purposes shall be clean and uncontaminated.
2. No person whose presence is not required shall be permitted to remain in any cow stable, milk house, or bottling room.

SUBNORMAL MILK.

REQUIREMENTS.

1. Natural milk that contains less than 3.25 per cent, but more than 2.5 per cent milk fat, and that complies in all other respects with the requirements above set forth, may be sold, provided the percentage of fat does not fall below a definite percentage that is stated in a conspicuous manner on the container; and further provided that such container is conspicuously marked "substandard milk."

CREAM.

REQUIREMENTS AND RECOMMENDATIONS.

1. It shall be obtained from milk that is produced and handled in accordance with the provisions hereinbefore set forth for the production and handling of milk.

STANDARDS FOR MILK.

REQUIREMENTS.

1. It shall not contain more than 100,000 bacteria per cubic centimeter.
2. It shall contain not less than 3.25 per cent milk fat.
3. It shall contain not less than 8.5 per cent solids not fat.

RECOMMENDATIONS.

1. The bacterial limit shall be lowered if possible.

STANDARDS FOR CREAM.

REQUIREMENTS.

1. There shall be a bacterial standard for cream corresponding to the grade of milk from which it is made and to its butter-fat content.
2. It shall contain not less than 18 per cent milk fat.

RECOMMENDATIONS.

Same as above for milk.

STANDARDS FOR SKIM MILK.

REQUIREMENTS.

1. It shall contain not less than 8.75 per cent milk solids.
2. Control of sale of skim milk: Whether skim milk is sold in wagons or in stores all containers holding skim milk should be painted some bright, distinctive color and prominently and legibly marked "skim milk." When skim milk is placed in the buyer's container, a label or tag bearing the words "skim milk" should be attached.

PASTEURIZED MILK.

Pasteurized milk is milk that is heated to a temperature of not less than 140° F. for not less than 20 minutes, or not over 155° F. for not less than 5 minutes, and for each degree of temperature over 140° F. the length of time may be 1 minute less than 20. Said milk shall be cooled immediately to 50° F. or below and kept at or below that temperature.

COW STABLES.**REQUIREMENTS.**

The same as for the production of raw milk.

RECOMMENDATIONS.

The same as for the production of raw milk.

MILK ROOM.**REQUIREMENTS.**

The same as for the production of raw milk.

RECOMMENDATIONS.

The same as for the production of raw milk.

COWS.**REQUIREMENTS.**

The same as for the production of raw milk, with the exception of the sections relating to the tuberculin test.

RECOMMENDATIONS.

That no cows be added to a herd excepting those found to be free from tuberculosis by the tuberculin test.

EMPLOYEES.**REQUIREMENTS.**

The same as for the production of raw milk.

RECOMMENDATIONS.

The same as for the production of raw milk.

UTENSILS.**REQUIREMENTS.**

The same as for the production of raw milk.

RECOMMENDATIONS.

The same as for the production of raw milk.

MILK FOR PASTEURIZATION.

REQUIREMENTS.

1. The same as for the production of raw milk, with the exception of sections 1, 2, and 6b.

2. It shall be cooled to 60° F. or below within two hours after it is drawn from the cow, and it shall be held at or below that temperature until it is pasteurized. After pasteurization, it shall be held at a temperature not exceeding 50° F. until delivered to the consumer.

3. Pasteurized milk shall be distinctly labeled as such, together with the temperature at which it is pasteurized and the shortest length of exposure to that temperature and the date of pasteurization.

RECOMMENDATIONS.

1. No milk shall be repasteurized.

2. The requirements governing the production and handling of milk for pasteurization should be raised wherever practicable.

PASTEURIZING PLANTS.

REQUIREMENTS.

The same as under "Receiving stations and bottling plants" for raw milk.

RECOMMENDATIONS.

The same as under "Receiving stations and bottling plants" for raw milk.

STORES.

REQUIREMENTS.

The same as for raw milk.

RECOMMENDATIONS.

The same as for raw milk.

GENERAL REGULATIONS.

REQUIREMENTS.

1. It is recommended that dairies producing milk which is to be pasteurized shall be scored on the United States Bureau of Animal Industry score card, and that health departments, or the controlling departments whatever they may be, strive to bring these scores up as rapidly as possible.

2. Milk from cows that have been rejected by the tuberculin test, but which show no physical signs of tuberculosis, as well as those which have not been tested, may be sold provided that it is produced and handled in accordance with all the other requirements herein set forth for pasteurized milk.

3. Ice used for cooling purposes shall be clean.

RECOMMENDATIONS.

The same as for raw milk.

PASTEURIZED CREAM.**REQUIREMENTS.**

1. It shall be obtained only from milk that could legally be sold as milk under the requirements hereinbefore set forth.

2. Pasteurized cream, or cream separated from pasteurized milk, shall be labeled in the manner herein provided for the labeling of pasteurized milk.

STANDARDS FOR PASTEURIZED MILK.**REQUIREMENTS.**

1. It shall not contain more than 1,000,000 bacteria per cubic centimeter before pasteurization, nor over 50,000 when delivered to the consumer.

2. The standards for the percentage of milk fat and of total solids shall be the same as for raw milk.

RECOMMENDATIONS.

1. The limits for the bacterial count before pasteurization and after pasteurization should both be lowered if possible.

STANDARDS FOR PASTEURIZED CREAM.**REQUIREMENTS.**

1. No cream shall be sold that is obtained from pasteurized milk that could not be legally sold under the provisions herein set forth, nor shall any cream that is pasteurized after separation contain an excessive number of bacteria.

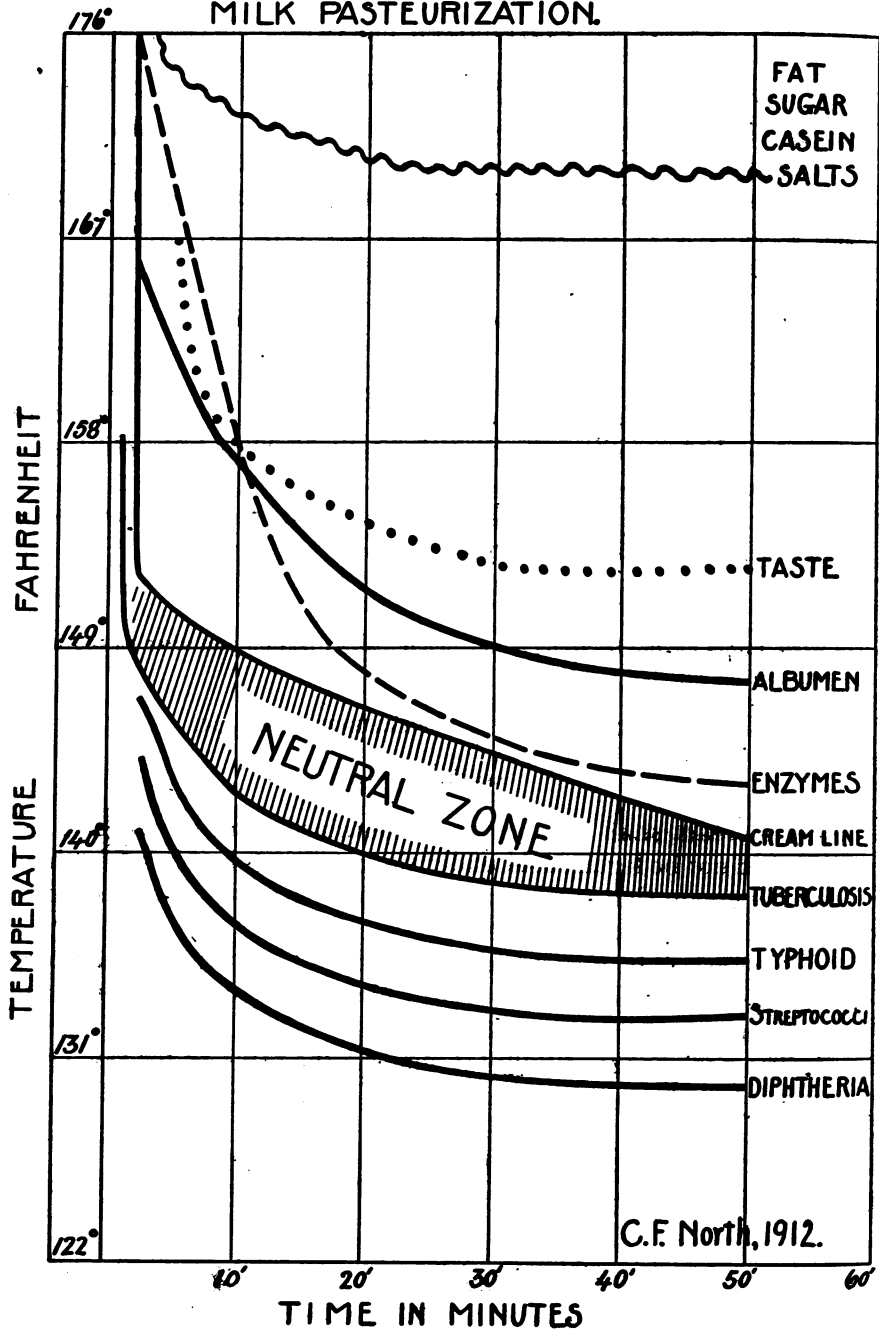
2. There shall be a bacterial standard for pasteurized cream corresponding to the grade of milk from which it is made and to its butter-fat content.

3. The percentage of milk fat shall be the same as for raw cream.

PENALTY.

Every milk ordinance should contain a penalty clause.

TIME AND TEMPERATURE FOR MILK PASTEURIZATION.



PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

IN CERTAIN STATES AND CITIES.

SMALLPOX.

Miscellaneous State Reports.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Connecticut (July 1-31): County—			Montana (July 1-31): Counties—		
Middlesex.....	1		Broadwater.....	1	
Florida (July 1-31): Counties—			Cascade.....	10	
Columbia.....	2		Carbon.....	3	
Duval.....	38		Dawson.....	3	
Escambia.....	8		Fergus.....	5	
Hillsboro.....	3		Flathead.....	6	
Lee.....	1		Hill.....	3	
Manatee.....	1		Missoula.....	1	
Polk.....	8		Stillwater.....	1	
Putnam.....	4		Sheridan.....	3	
Santa Rosa.....	1		Silver Bow.....	4	
St. Johns.....	5		Yellowstone.....	1	
Total.....	71		Total.....	41	

City Reports for Week Ended Aug. 2, 1913.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.....	1		New Orleans, La.....	8	
Biddeford, Me.....	2		Niagara Falls, N. Y.....	1	
Buffalo, N. Y.....	1		Norristown, Pa.....	1	
Cleveland, Ohio.....	4		Richmond, Va.....	1	
Houston, Tex.....	4		Seattle, Wash.....	1	
Lexington, Ky.....	4		Spokane, Wash.....	3	
Lowell, Mass.....	1		Superior, Wis.....	1	
Marquette, Wis.....	1		Toledo, Ohio.....	2	
Milwaukee, Wis.....	5				

TYPHOID FEVER.

Indiana—Evansville.

Acting Asst. Surg. Werry, of the Public Health Service, reported by telegraph that during the week ended August 16, 1913, 10 cases of typhoid fever had been notified in Evansville, Ind., making a total of 199 cases reported since June 14, 1913.

TYPHOID FEVER—Continued.**Pennsylvania—Chester.**

Passed Asst. Surg. Robertson, of the Public Health Service, reported by telegraph that since August 5, 1913, 29 cases of typhoid fever had been notified in Chester, Pa.

CEREBROSPINAL MENINGITIS.**Cases and Deaths Reported by Cities for Week Ended Aug. 2, 1913.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Bayonne, N. J.....	1	.....	Los Angeles, Cal.....	2	1
Boston, Mass.....	.....	1	Lowell, Mass.....	1	2
Clinton, Mass.....	.....	1	New Bedford, Mass.....	.....	1
Columbus, Ohio.....	1	.....	Pittsfield, Mass.....	.....	1
Everett, Mass.....	1	1	Reading, Pa.....	1	1
Jersey City, N. J.....	.....	1	St. Louis, Mo.....	2	.....

POLIOMYELITIS (INFANTILE PARALYSIS).**Cases and Deaths Reported by Cities for Week Ended Aug. 2, 1913.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Chicago, Ill.....	1	.....	Northampton, Mass.....	1	1
Cleveland, Ohio.....	2	.....	Oklahoma, Okla.....	1	1
Concord, N. H.....	1	.....	Providence, R. I.....	.....	1
New Bedford, Mass.....	1	.....	Saginaw, Mich.....	1	.....

ERYSIPELAS.**Cases and Deaths Reported by Cities for Week Ended Aug. 2, 1913.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Binghamton, N. Y.....	2	.....	Milwaukee, Wis.....	3	1
Buffalo, N. Y.....	1	.....	Newark, N. J.....	.....	1
Chicago, Ill.....	2	1	New Orleans, La.....	.....	2
Cincinnati, Ohio.....	1	.....	Providence, R. I.....	1	.....
Cleveland, Ohio.....	3	.....	Reading, Pa.....	1	.....
Erie, Pa.....	1	.....	St. Louis, Mo.....	3	.....
Kalamazoo, Mich.....	1	.....	San Francisco, Cal.....	3	.....
Los Angeles, Cal.....	4	.....		

PELLAGRA.

During the week ended August 2, 1913, pellagra was reported by cities as follows: Lynchburg, Va., 1 case; Nashville, Tenn., 2 cases; Oklahoma, Okla., 1 case with 1 death.

PLAGUE.**Rats Collected and Examined.**

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California: ¹					
Cities—					
Oakland.....	Aug. 2, 1913	42	626	428	None.
Berkeley.....	do.....	4	174	129	Do.
San Francisco.....	do.....	20	1,806	1,414	Do.
Washington:					
City—					
Seattle.....	July 28-31, 1913.	.....	684	635	Do.

¹ Rats taken from steamships: *San Joel*, 26; *Persia*, 20; *Annie Johnson*, 27; total, 73.

California—Squirrels Collected and Examined.

During the week ended August 2, 1913, ground squirrels were examined for plague infection as follows: Alameda County, 116; Contra Costa County, 328; Santa Clara County, 2.

Plague-Infected Squirrels Found.

Of the squirrels examined during the week ended August 2, 1913, 1 from Alameda County, 6 from Contra Costa County, and 2 from Santa Clara County were found to be plague-infected.

PNEUMONIA.**Cases and Deaths Reported by Cities for Week Ended Aug. 2, 1913.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Alameda, Cal.....	1	1	Everett, Mass.....	1	1
Chicago, Ill.....	14	38	Manchester, N. H.....	4	4
Cleveland, Ohio.....	4	3	Mount Vernon, N. Y.....	1	.....
Duluth, Minn.....	1	1	Schenectady, N. Y.....	2	1
Dunkirk, N. Y.....	1	.....		

RABIES.**Oakland, Cal.—Rabies in Animals.**

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended August 16, 1913, 2 cases of canine rabies had been reported in Oakland, Cal.

TETANUS.**Deaths Reported by Cities for Week Ended Aug. 2, 1913.**

Places.	Deaths.	Places.	Deaths.
Baltimore, Md.....	1	La Crosse, Wis.....	2
Chicago, Ill.....	1	New Orleans, La.....	2
Cleveland, Ohio.....	1	Trenton, N. J.....	1

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.

Cases and Deaths Reported by Cities for Week Ended Aug. 2, 1913.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	558,485	225	12	1	7	2	14	1	31	15
Boston, Mass.	670,685	198	31	1	22	1	17	1	68	19
Chicago, Ill.	2,185,283	709	95	10	37	1	86	6	134	75
Cleveland, Ohio.	500,663	.....	30	4	30	3	9	.....	33	16
St. Louis, Mo.	687,029	217	19	.....	3	.....	8	.....	43	10
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	423,715	189	7	1	9	.....	4	.....	23	14
Cincinnati, Ohio.	364,463	142	7	1	2	.....	3	.....	24	21
Los Angeles, Cal.	319,198	102	10	.....	8	1	2	.....	35	17
Milwaukee, Wis.	373,867	85	13	1	10	.....	13	.....	22	15
Newark, N. J.	347,460	102	15	.....	23	1	7	.....	19	9
New Orleans, La.	340,675	113	15	.....	10	1	1	.....	32	10
San Francisco, Cal.	416,912	131	4	.....	2	.....	1	.....	34	19
Washington, D. C.	331,080	107	6	.....	2	.....	7	.....	29	10
From 200,000 to 300,000 inhabitants:										
Jersey City, N. J.	267,779	83	.....	.....	.....	.....	.....	.....	.....	8
Providence, R. I.	224,326	57	9	1	5	2	3	.....	7	3
Seattle, Wash.	237,194	43	2	.....	4	.....	1	.....	14	8
From 100,000 to 200,000 inhabitants:										
Bridgeport, Conn.	102,064	87	2	.....	1	.....	3	.....	5	2
Cambridge, Mass.	104,839	26	2	.....	10	.....	2	.....	6	4
Columbus, Ohio.	181,548	54	2	.....	.....	.....	6	.....	1	2
Dayton, Ohio	116,577	47	7	.....	1	.....	2	.....	5	2
Grand Rapids, Mich.	112,571	26	5	.....	1	.....	3	.....	7	1
Lowell, Mass.	106,284	36	2	.....	3	1	1	.....	2	3
Nashville, Tenn.	110,364	.....	.....	.....	.....	.....	.....	.....	4	2
Richmond, Va.	127,628	38	.....	.....	2	.....	1	.....	1	1
Spokane, Wash.	104,402	.....	.....	.....	2	.....	.....	.....	.....	.....
Toledo, Ohio.	168,497	66	8	.....	6	1	5	.....	5	8
Worcester, Mass.	145,986	43	6	1	5	1	3	.....	5	3
From 50,000 to 100,000 inhabitants:										
Altoona, Pa.	52,127	14	2	.....	.....	.....	1	.....	1	2
Bayonne, N. J.	55,545	12	3	.....	3	.....	3	.....	6	2
Brockton, Mass.	56,878	8	4	.....	1	.....	.....	.....	9	.....
Camden, N. J.	94,536	.....	3	.....	.....	.....	.....	.....	9	.....
Duluth, Minn.	78,466	19	5	1	5	.....	2	.....	2	2
Elizabeth, N. J.	73,409	25	3	.....	1	.....	.....	.....	3	1
Erie, Pa.	66,525	20	5	.....	.....	.....	1	.....	1	.....
Harrisburg, Pa.	64,186	24	1	.....	2	.....	.....	.....	5	2
Hartford, Conn.	98,915	49	8	1	1	.....	3	.....	1	.....
Hoboken, N. J.	70,324	.....	3	.....	1	.....	.....	.....	9	2
Houston, Tex.	78,800	25	1	.....	.....	.....	.....	.....	.....	2
Johnstown, Pa.	55,482	31	8	1	5	.....	3	.....	.....	.....
Kansas City, Kans.	82,331	.....	.....	.....	1	.....	.....	.....	2	.....
Lawrence, Mass.	85,892	.....	1	.....	3	.....	.....	.....	3	.....
Lynn, Mass.	89,336	20	3	.....	1	.....	.....	.....	3	1
Manchester, N. H.	70,063	48	2	.....	1	.....	3	1	.....	.....
New Bedford, Mass.	96,652	43	1	1	.....	.....	.....	.....	6	3
Passaic, N. J.	54,773	25	1	.....	3	.....	.....	.....	2	1
Pawtucket, R. I.	51,622	.....	.....	.....	.....	.....	.....	.....	2	2
Reading, Pa.	96,071	39	2	.....	.....	1	4	.....	6	2
Saginaw, Mich.	50,510	11	2	.....	.....	.....	1	.....	1	.....
St. Joseph, Mo.	77,403	25	1	.....	.....	1	1	.....	4	2
Schenectady, N. Y.	72,826	25	.....	.....	2	.....	8	1	1	3
Springfield, Mass.	88,926	24	.....	.....	1	.....	.....	.....	7	.....
Trenton, N. J.	96,815	54	2	.....	2	.....	.....	1	6	4
Wilkes-Barre, Pa.	67,106	30	2	.....	2	1	1	.....	2	.....
Yonkers, N. Y.	79,803	27	7	1	5	.....	6	1	.....	4
From 25,000 to 50,000 inhabitants:										
Auburn, N. Y.	34,668	11	1	.....	.....	.....	.....	.....	.....	2
Aurora, Ill.	29,807	13	.....	.....	.....	.....	1	.....	.....	.....
Austin, Tex.	29,890	9	2	.....	.....	.....	3	.....	.....	1
Binghamton, N. Y.	48,443	21	3	1	18	1	.....	.....	1	2
Brookline, Mass.	37,792	8	1	.....	.....	.....	.....	.....	.....	.....
Chelsea, Mass.	32,463	12	1	.....	3	.....	.....	.....	2	1
Chicopee, Mass.	25,401	9	.....	.....	.....	.....	4	1	.....	.....
Danville, Ill.	27,871	18	.....	.....	1	.....	.....	.....	.....	1

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS—Contd.

Cases and Deaths Reported by Cities for Week Ended Aug. 2, 1913—Continued.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
East Orange, N. J.	34,371						1		2	
Elmira, N. Y.	37,176	7							2	
Everett, Mass.	33,484	16	1				1			
Fitchburg, Mass.	37,826	7			2					1
Haverhill, Mass.	44,115	5			1				3	
Kalamazoo, Mich.	39,437	13							4	1
La Crosse, Wis.	30,417	14	7							
Lancaster, Pa.	47,227		1				1		1	
Lexington, Ky.	35,099	14							2	1
Lynchburg, Va.	29,494	9	1							
Montgomery, Ala.	38,136	21							4	2
Mount Vernon, N. Y.	30,919				2				1	
Newcastle, Pa.	36,280		1		1		2			
Newton, Mass.	39,896								2	
Niagara Falls, N. Y.	30,445	15	1		2		1		2	1
Norristown, Pa.	27,875	4	2						1	
Orange, N. J.	29,680	2	2		2					
Pittsfield, Mass.	32,121	16			2		1		4	
Portsmouth, Va.	36,190	16			1	1				
Racine, Wis.	38,002	11	1	1						
Roanoke, Va.	34,874	12					1			2
Sacramento, Cal.	44,686	19			2					1
San Diego, Cal.	39,578		1						1	1
South Omaha, Nebr.	26,259	6								
Superior, Wis.	40,384	11							1	3
Taunton, Mass.	34,259	10			3		1			
Waltham, Mass.	27,834	12			1		3		2	1
West Hoboken, N. J.	35,403								4	
Wheeling, W. Va.	41,641	17	1						1	3
Wilmington, N. C.	25,748	11	2				1		3	
Zanesville, Ohio	28,026	10	1							1
Less than 25,000 inhabitants:										
Alameda, Cal.	23,833	5								
Ann Arbor, Mich.	14,817	8			1				8	
Beaver Falls, Pa.	12,191	0	1		1					
Braddock, Pa.	17,789		1							
Cambridge, Ohio.	17,327	4								
Clinton, Mass.	13,078	3			1				1	
Columbus, Ind.	6,719	2			1					
Concord, N. H.	21,427	6			1					
Cumberland, Md.	21,839	14							3	1
Dunkirk, N. Y.	11,616	6							1	1
Franklin, N. H.	6,132	3								
Galesburg, Ill.	22,089	8							1	1
Gloucester, Mass.	24,398	3								
Harrison, N. J.	14,489								1	
Kearny, N. J.	28,659		1						2	
La Fayette, Ind.	20,081	10								
Marquette, Wis.	14,610	3					1			
Marlboro, Mass.	14,579	3								1
Medford, Mass.	23,150	5	2							
Melrose, Mass.	15,715	6								
Moline, Ill.	24,190	11								1
Montclair, N. J.	21,450	6	1				1			
Morristown, N. J.	12,507	10							2	
Nanticoke, Pa.	18,857	8								
Newburyport, Mass.	19,240	2								
Northampton, Mass.	23,310	2								
North Adams, Mass.	22,019	7					2		2	1
Palmer, Mass.	23,550	1								
Plainfield, N. J.	7,801	5	1				1		1	
Pottstown, Pa.	15,599	7			1					
Rutland, Vt.	11,499	3	1							
Saratoga Springs, N. Y.	113,534	4	1							
South Bethlehem, Pa.	13,241	5					1		1	1
Steelton, Pa.	14,477	3							3	1
Wilkinsburg, Pa.	18,594	6			1					1
Woburn, Mass.	15,308	5								

IN INSULAR POSSESSIONS.

HAWAII.

Examination of Rodents.

Rats and mongoose have been examined in Hawaii as follows: Week ended July 26, 1913—at Honolulu, 359; week ended July 19—at Hilo, 1,505; at Honokea, 1,389. No plague-infected rodent was found.

PORTO RICO.

Rodents Collected and Examined.

Rodents have been examined in Porto Rico as follows: Week ended July 26, 1913—1,069 collected from various points in Porto Rico, 664 having been collected from various parts of San Juan municipality; week ended August 2, 1913—1,134 rodents, of which 723 were collected from various parts of San Juan municipality. None was found infected with plague.

FOREIGN REPORTS.

CHINA.

Hongkong—Plague—Plague-Infected Rats.

During the week ended June 28, 1913, there were notified in Hongkong 20 cases of plague with 19 deaths.

During the same period there were examined for plague infection 2,619 rats, of which number 13 were found to be plague-infected.

Shanghai—Plague.

From June 12 to 18, 1913, there were notified at Shanghai 8 cases of plague with 7 deaths. These cases originated in the same focus in the Yangtzeepoo district, and occurred in Chinese mill workers.

CUBA.

Habana—Yellow Fever On Vessel.

A case of yellow fever developed August 8, 1913, at Habana, in the person of a passenger on the steamship *Morro Castle*, from Progreso, Mexico. The *Morro Castle* left Progreso August 2 and arrived at Habana August 4. The passenger was from Campeche.

Quarantine Against Canary Islands Removed.

By official order of August 11, 1913, quarantine restrictions at Cuban ports against arrivals from the Canary Islands on account of plague were removed, such arrivals remaining subject to the requirements of the quarantine service in regard to the deratization of vessels.

MEXICO.

Yellow Fever.

During the week ended August 2, 1913, a death from yellow fever was notified at Campeche. On August 15, 3 cases of yellow fever at Campeche were reported by telegraph.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.**Reports Received During Week Ended Aug. 22, 1913.****CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Java—				
Batavia.....	June 30-July 5....	49	36	3 fatal cases among Europeans.
India:				
Bombay.....	July 6-12.....	1	1	
Madras.....	do.....	1	1	
Siam:				
Bangkok.....	May 18-June 14....		3	
Turkey in Europe:				
Saloniki.....	July 21-27.....	12	20	Among civilians.

YELLOW FEVER.

Brasil:				
Bahia.....	June 20-July 19...	6	4	
Pernambuco.....	June 16-30.....		1	
Cuba:				
Habana.....	Aug. 8-14.....	1		From steamship Morro Castle. A passenger from Campeche.
Mexico:				
Campeche.....	July 29-Aug. 2....		1	Aug. 15, 3 cases.

PLAGUE.

Brasil:				
Bahia.....	June 30-July 19...	17	6	
China:				
Canton.....				June 28, present in vicinity. In the eastern section, 76 fatal cases.
Hongkong.....	June 30-July 5....	17	11	
Dutch East Africa:				
Muanza.....	May 20-June 11...	252	236	
Egypt:				
Alexandria.....	July 9-23.....	6	2	
Port Said.....	July 10-24.....	2		
Provinces—				
Fayoum.....	July 9-13.....	3	2	
Garbieh.....	July 9-21.....	1		
Menouf.....	June 6-July 14....	1	2	
Minieh.....	July 11-22.....	2	1	
India:				
Bombay.....	July 6-12.....	21	16	
Siam:				
Bangkok.....	May 18-June 14....		6	
Turkey in Asia:				
Basra.....	June 3.....	31		

SMALLPOX.

Brasil:				
Bahia.....	June 30-July 5....	1		
Pernambuco.....	June 16-30.....		26	
Canada:				
Montreal.....	Aug. 3-9.....	1	1	
Ottawa.....	July 20-26.....	2		
Quebec.....	Aug. 3-9.....	1		
China:				
Shanghai.....	July 2-8.....	1		
France:				
Paris.....	July 13-19.....	2		
Great Britain:				
Manchester.....	July 20-26.....	1		
Greece:				
Patras.....	July 21-Aug. 3....		2	
India:				
Bombay.....	June 30-July 12....	11	9	
Madras.....	do.....	5		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**Reports Received During Week Ended Aug. 22, 1913—Continued.****SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Guadalajara.....	July 20-26.....	11	.....
San Luis Potosi.....	July 6-12.....	1	4	
Newfoundland:				
St. Johns.....	July 27-Aug. 9.....	2	.....
Portugal:				
Lisbon.....	July 20-26.....	6	.....
Russia:				
St. Petersburg.....	July 6-12.....	1	.....
Warsaw.....	May 4-17.....	10	3	
Servia:				
Belgrade.....	July 6-12.....	1	.....
Siam:				
Bangkok.....	May 18-June 14.....	.....	1	
Spain:				
Barcelona.....	July 19-Aug. 1.....	.....	13	
Turkey in Europe:				
Constantinople.....	July 20-Aug. 2.....	.....	7	
Saloniki.....	July 21-27.....	1	.....

Reports Received from June 28 to Aug. 15, 1913.**CHOLERA.**

Austria-Hungary:				
Hungary—				
Temessziget.....	July 31.....	5	3	Kevevera district.
China:				
Hongkong.....				Aug. 12, 10 cases, 9 deaths.
Dutch East Indies:				
Java—				
Batavia.....	May 18-June 28....	208	158	And Tanjong-Priok, May 26-June 28, 8 cases among Europeans.
Madison, Province.....	Apr. 22-28.....	1	1	
Sibiru.....	Mar. 24-Apr. 27...	117	104	
India:				
Bassein.....	May 4-June 21....	29	22	
Bombay.....	May 25-July 5....	6	4	
Calcutta.....	Apr. 27-June 21....	.....	320	
Madras.....	June 15-21.....	1	.....
Moulmine.....	May 4-June 14....	6	6	
Rangoon.....	May 1-31.....	3	1	
Indo-China.....				Total, Jan. 1-May 20: Cases, 79; deaths, 54.
Roumania.....	Aug. 1.....	5	1	In vicinity of Bucharest.
Servia.....				July 19, epidemic.
Belgrade.....	July 19.....			Epidemic among the military and civilians.
				July 8, 50 cases among prisoners from Saloniki (Macedonia).
Nisch.....	.....do.....	14	.....
Pirot.....	.....do.....	8	.....
Siam:				
Bangkok.....	Mar. 23-May 17....	.....	7	
Straits Settlements:				
Singapore.....	July 13-14.....	2	.....
Turkey in Asia:				
Smyrna.....	July 31.....	.....	.....	Present.
Turkey in Europe:				
Saloniki (Macedonia).....				July 19-Aug. 8, epidemic.
Saloniki.....	July 7-13.....	5	6	Among civilians. July 10, present in Kavalla, Drama, Orfana, Serres, and Stroumitsa.

YELLOW FEVER.

Brazil:				
Bahia.....	May 11-June 21....	15	7	
Manaos.....	June 30-July 5....	6	6	
Pernambuco.....	May 1-June 15.....	.....	2	
Rio de Janeiro.....	May 25-June 7....	2	1	July 8, 2 fatal cases.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**Reports Received from June 28 to Aug. 15, 1913—Continued.****YELLOW FEVER—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Cuba:				
Habana.....	July 16.....			1 case on s. s. Hydra, which left Manaos June 17, Para June 21. Four deaths occurred in voyage: 2 at Manaos, 1 at Guanatanamo, and 1 at Cienfuegos.
Ecuador:				
Babahoyo.....	June 1-30.....	1	1	
Bucay.....	do.....	2	2	
Duran.....	May 1-31.....	1		
Guayaquil.....	May 1-June 30.....	22	15	
Milagro.....	do.....	17	8	
Naranjito.....	do.....	4	4	
Mexico:				
Campeche.....	May 25-July 26....	4	3	1 fatal case to June 7 reported on page 1373, Part I.
Southern Nigeria:				
Lagos.....	May 12.....	1		July 23, present.
Worri.....	June 1-30.....			Present.
Venezuela:				
Caracas.....	Feb. 1-28.....	1		
Do.....	May 1-31.....	1		From Valencia. ¹

¹ This case was reported June 18. See p. 1458.**PLAGUE.**

Arabia:				
Aden.....	June 3-25.....	8	4	Total Apr. 9-June 25: Cases 81, deaths 59.
Brazil:				
Bahia.....	May 11-21.....	31	25	
British East Africa.....	May 15-June 12.....			1 death. Report from Apr. 15-May 14 not received.
Kisumu.....	do.....	3		
Mombasa.....	do.....	10		
Nairobi.....	do.....	2		
Chile:				
Iquique.....	May 11-July 12....	15	5	
China.....				
Amoy.....	June 15-21.....		50	May 18-June 14, still present in Ampo, Chaoyang, Fungshun, Kityang, Puning, Ta-pu, and other points along the railway.
Kulansu.....	Jan. 1-May 24.....		29	May 25-June 7, 10 to 20 deaths daily.
Canton.....				June 7, 1 or 2 deaths daily
Hongkong.....	May 18-June 28....	115	97	May 1-15, 60 to 70 fatal cases in the eastern part. Apr. 10-May 22, 300 fatal cases in the Sun-niger district.
Kaochow.....	Apr. 10-May 22.....			Aug. 8, 23 cases; Aug. 12, 14 cases.
Shanghai.....	June 1-15.....	8	7	10 deaths daily.
Dutch East Africa:				Among natives.
Districts—				
Usmawo.....				Present.
Misungi.....	Mar. 15-May 10....			Do.
Nora.....	do.....			Do.
Urima.....	do.....			
Muanza.....	Mar. 15-May 20....	251	223	
Dutch East Indies:				
Java—				
Districts—				
Kediri.....	Apr. 1-May 31.....	214	97	
Madjoen.....	do.....	88	83	
Malang.....	do.....	1,002	972	
Surabaya.....	do.....	37	34	
Ecuador:				
Guayaquil.....	May 1-June 30....	13	3	
Milagro.....	May 1-31.....	1	1	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 28 to Aug. 15, 1913—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Egypt.....				Total, Jan. 1-July 10: Cases, 526; deaths, 249. June 13-July 10: Cases, 63; deaths, 27.
Alexandria.....	May 28-July 8.....	12	7	
Port Said.....	June 2-July 9.....	4	1	
Provinces—				
Behera.....	June 13-July 9.....	3	1	
Fayoum.....	May 30-July 9.....	39	13	
Galkoubah.....	May 21-June 10.....	4	1	
Garbieh.....	May 27-July 8.....	27	28	Jan. 1-May 26; Cases, 12; deaths, 5.
Gizeh.....	May 29-July 1.....	6	1	
Menouf.....	May 28-June 12.....	1	1	Jan. 1-May 26: Cases, 51; deaths, 24.
Minieh.....	May 30-July 10.....	21	7	
India:				
Bombay.....	May 18-July 5.....	482	417	
Calcutta.....	Apr. 27-June 21.....		245	
Karachi.....	May 18-June 28.....	124	110	
Rangoon.....	May 1-31.....	51	48	
Indo-China.....				Total Jan. 1-May 20: Cases, 1,927; deaths, 1,875.
Japan:				
Taiwan—				
Kagi.....	June 1-28.....	35	29	
Mauritius.....	Apr. 18-May 10.....	3	3	
Persia.....				June 5, in Kermanschah Province, 150 cases, at Caravadeh, Harounabad, and Loud. June 11, present in vicinity of Abassabad.
Ardilan, Province.....	June 11.....		3	
Djame-Chouran.....	May 31.....	7	6	
Faisabad.....	June 11.....		3	
Gommi.....	do.....		11	
Mahi-Dacht.....	June 4.....	2	2	
Taybat.....	June 11.....		3	
Zeviry.....	May 31.....	4	3	
Peru:				
Departments—				
Arequipa.....				
Mollendo.....	Apr. 28-June 8.....	5	2	
Libertad—				
Chiclayo.....	do.....	1	1	
San Pedro.....	do.....	1	1	
Trujillo.....	May 19-June 8.....			Present. July 8, 3 cases in the lazaretto. Salaverry, June 4-17, 2 cases.
Lima.....	do.....	6		
Philippine Islands:				
Manila.....	May 11-24.....	3		
Russia:				
Astrakhan—				
Tsarev.....	June 3-10.....		9	Pneumonic form.
Siam:				
Bangkok.....	Mar. 23-Apr. 19.....		4	
Korat.....	Mar. 21-31.....			Epidemic.
Straits Settlements:				
Singapore.....	June 15-21.....	1	1	
Turkey in Asia:				
Basra.....	July 14-21.....	1	1	
Uruguay:				
Montevideo.....				July 28, present.

SMALLPOX.

Algeria:			
Departments—			
Algiers.....	May 1-31.....	1	
Constantine.....	Apr. 1-May 31.....	21	
Oran.....	May 1-31.....	25	
Arabia:			
Aden.....	June 3-9.....	1	
Argentina:			
Buenos Aires.....	Apr. 1-May 31.....		7

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 28 to Aug. 15, 1913—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Australia:				
Sydney.....	July 7.....	.....	.....	Present.
Austria-Hungary:				
Coastland.....	July 6-12.....	1	.....
Fiume.....	May 27-July 7.....	19	1	
Galicla.....	July 6-Aug. 12.....	1	.....
Krain.....	do.....	1	.....
Trieste.....	June 1-July 5.....	3	.....	Case June 14 from Patras.
Belgium:				
Antwerp.....	July 1-7.....	1	.....
Brazil:				
Bahia.....	May 11-June 21.....	8	1	
Manaos.....	June 15-21.....	1	.....
Para.....	June 15-July 19.....	33	19	
Pernambuco.....	May 1-June 15.....	.....	70	
Rio de Janeiro.....	May 4-June 28.....	55	12	
Canada:				
Provinces—				
British Columbia—				
Vancouver.....	June 8-14.....	1	.....
Manitoba—				
Winnipeg.....	June 15-July 19.....	13	.....
Nova Scotia:				
Sydney.....	July 14-Aug. 2.....	2	.....	Case July 14 from s. s. Earl Grey from Marseille.
Ontario—				
Fort William.....	June 10-30.....	4	.....
Ottawa.....	June 8-July 12.....	7	.....
Toronto.....	June 16-Aug. 2.....	9	.....
Quebec—				
Grosse Isle Quarantine.....	June 20.....	1	1	In steerage.
Quebec.....	June 8-Aug. 2.....	3	.....
Montreal.....	July 6-Aug. 2.....	15	1	
St. Johns.....	May 25-July 5.....	4	.....
Chile:				
Iquique.....	June 1-21.....	2	.....	Present.
Santiago.....	June 15-29.....	.....	.....	Do.
Valparaiso.....	July 12.....	.....	.....	Do.
China:				
Amoy.....	May 25-June 7.....	.....	.....	Do.
Kulansu.....	May 25-31.....	.....	.....	Do.
Hongkong.....	May 18-June 14.....	9	7	
Nanking.....	May 11-21.....	.....	.....	Do.
Shanghai.....	May 19-July 6.....	6	44	Deaths among natives.
Tientsin.....	June 8-14.....	.....	1	
Dutch East Indies:				
Batavia.....	June 22-28.....	1	.....
Surabaya.....	May 11-31.....	4	.....
Egypt:				
Alexandria.....	May 28-July 15.....	21	14	
Cairo.....	May 14-July 1.....	29	5	
France:				
Lyon.....	June 23-29.....	.....	1	
Marseille.....	May 1-June 30.....	.....	12	
Paris.....	May 25-July 12.....	17	.....
Germany:				
Kehl.....	June 30.....	1	1	Total June 8-July 12: Cases 4.
Great Britain:				
Liverpool.....	May 25-June 14.....	3	.....
Greece:				
Patras.....	June 9-July 13.....	.....	5	
India:				
Bombay.....	May 26-June 28.....	43	37	
Karachi.....	May 25-31.....	9	.....
Madras.....	May 24-June 21.....	6	6	
Rangoon.....	May 1-31.....	28	12	
Italy:				
Rome.....	Jan. 5-11.....	1	1	
Japan:				
Hokkaido.....	Apr. 1-30.....	1	.....	Total Jan. 1-May 25: Cases, 22; deaths, 5. May 1-31: Cases, 11; deaths, 2.
Kanagawa ken.....	May 1-31.....	1	.....
Kobe.....	June 22-29.....	1	.....
Nagasaki ken.....	May 1-31.....	7	1	Including 3 cases previously re- ported.
Oita ken.....	do.....	2	.....
Tokio.....	June 18-May 31.....	2	1	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 28 to Aug. 15, 1913—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Luxemburg:				
Esch.....	May 17-31.....	2	.....
Mauritius:	Apr. 13-June 7....	793	86	
Mexico:				
Acapulco.....	May 25-July 12....	.....	4	
Aguscalientes.....	June 9-July 20....	.....	16	
Chihuahua.....	June 23-Aug. 2....	.....	8	
Guadalajara.....	June 8-July 19....	23	.....
Hermosillo.....	June 7-July 13....	93	71	Among troops.
Manzanillo.....	July 18.....	.....	.....	Present.
Mexico.....	Apr. 20-June 21....	81	53	
Monterey.....	June 9-July 13....	.....	6	
San Luis Potosi.....	Apr. 27-May 17....	5	3	
Veracruz.....	June 16-July 6....	9	2	
Newfoundland:				
St. Johns.....	June 15-July 26....	24	.....
Portugal:				
Lisbon.....	May 25-July 19....	41	.....
Russia:				
Batoum.....	Apr. 1-30.....	1	.....
Libau.....	June 2-July 6....	1	1	
Moscow.....	May 18-July 5....	59	17	
Odesa.....	June 8-July 19....	38	10	
Riga.....	June 22-28.....	6	.....
St. Petersburg.....	May 18-July 5....	13	.....
Siberia—				
Vladivostok.....	May 7-13.....	2	.....
Warsaw.....	Feb. 23-May 3....	27	10	
Samoa:				
Apia.....				May 18, 1 death on transport Michael Jepson, from Hong-kong, and to June 4, 4 cases transferred from this vessel to a lighter 3 miles east.
Servia:				
Belgrade.....	June 1-21.....	8	1	July 10, present in Dubotsi, Neresnitza, and Volui.
Siam:				
Bangkok.....	Mar. 23-May 17....	.....	5	
Spain:				
Almeria.....	June 1-30.....	.....	2	
Barcelona.....	June 8-July 12....	.....	39	
Cadiz.....	May 1-31.....	.....	2	
Madrid.....	June 1-30.....	.....	13	
Valencia.....	June 1-28.....	2	.....
Straits Settlements:				
Singapore.....	May 4-10.....	1	1	
Switzerland:				
Cantons—				
Basel.....	June 1-July 19....	21	.....
Zurich.....	May 18-24.....	1	.....	From Paris.
Turkey in Asia:				
Beirut.....	May 25-July 5....	21	3	
Damascus.....	June 1-7.....	.....	.....	Present.
Mersina.....	May 25-31.....	.....	2	
Smyrna.....	Apr. 26-May 31....	.....	27	
Turkey in Europe:				
Constantinople.....	June 1-July 19....	.....	38	
Saloniki.....	June 2-July 6....	15	15	
Union of South Africa:				
Johannesburg.....	May 10-June 7....	23	.....

SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

DELAWARE.

Births—Registration of. (Act Mar. 31, 1913.)

SECTION 1. That the State Board of Health of Delaware shall have charge of the registration of births, prepare the necessary methods, forms, and blanks for obtaining and preserving such records and to insure the faithful registration of the same in the cities, counties (with the recorder of deeds of each county) with the local registrar of each district, and in the central bureau of vital statistics of the State. The said board shall be charged with the uniform and thorough enforcement of the law throughout the State, and shall from time to time make and promulgate any additional rules, forms, and amendments that may be necessary for this purpose.

SEC. 2. That the secretary of the state board of health shall be the State registrar of vital statistics, and shall have general supervision over the central bureau of vital statistics, which is hereby authorized to be established by said board, and which shall be under the immediate direction of the said State registrar, and who shall be a medical practitioner of not less than five years' practice in his profession, and a competent vital statistician. The State registrar of vital statistics shall receive an annual salary to be fixed by the State board of health, payable quarterly. The State board of health shall provide for such clerical and other assistants as may be necessary for the purpose of this act, who shall serve during the pleasure of the board, and may fix the compensation of persons thus employed within the amount appropriated therefor by the legislature. Suitable equipment shall be provided for the bureau of vital statistics, which shall be properly equipped with filing cases for the permanent preservation of all official records made and returned under this act.

SEC. 3. That for the purposes of this act the State shall be divided into vital statistic registration districts by the State board of health; provided, however, that the city of Wilmington shall be one of the vital statistics registration districts of the State.

SEC. 4. The State board of health shall appoint a local registrar of vital statistics for each vital statistics registration district in the State, and the State registrar shall approve of the deputy to act in case of illness or absence of the local registrar; *provided, however*, That the State board of health shall appoint the registrar of births, deaths, and marriages of the city of Wilmington the local registrar of the vital statistic registration district of Wilmington as provided in section 3.

The term of office of local registrar appointed by said board and their deputies shall be for two years, beginning with the 1st day of May, 1913, and shall continue in office as such until removed or the election of a successor: *Provided, however*, That the term of office of the local registrar of the vital statistic registration district of Wilmington shall commence and end with the term of office of the registrar of births, deaths, and marriages of the city of Wilmington.

Any local registrar appointed by said board or his deputy who fails or neglects to discharge efficiently the duties of his office as laid down in this act or who fails to

comply with the rules of the State board of health or who fails to make prompt and complete returns of births as required hereby shall be forthwith removed from his office by the State board of health and his successor appointed, in addition to any other penalties that may be imposed for failure or neglect to perform his duty under this act.

Each local registrar appointed by said board shall, immediately upon his acceptance of appointment as such, appoint a deputy, whose duty it shall be to act in his stead in case of absence, illness, or disability. Said deputy registrar shall in writing accept such appointment and shall be subject to all laws, rules, and regulations governing the action of local registrars. And when it may appear necessary for the convenience of the people in any district the local registrar is hereby authorized, with the approval of the State registrar, to appoint one or more suitable persons to act as local sub-registrars, who shall be authorized to receive birth certificates in and for such portions of the district as may be designated, and each subregistrar shall note, over his signature, the date on which each certificate was filed and shall forward all certificates to the local registrar of the district within 10 days after receiving the same and in all cases before the third day of the following month: *Provided*, That all subregistrars shall be subject to the supervision and control of the State registrar and may be by him removed for neglect or failure to perform their duties in accordance with the provisions of this act or the rules and regulations of the State board of health and the State registrar, and they shall be liable to the same penalties for neglect of duties as the local registrar.

SEC. 5. That all births that occur in the State shall be immediately registered in the registration district in which they occur, as provided by this act.

SEC. 6. That it shall be the duty of the attending physician or midwife to file a certificate of birth, properly and completely filled out, giving all the particulars required by this act, with the local registrar of the district in which the birth occurred within 10 days after the date of birth, and if there be no attending physician or midwife, then it shall be the duty of the father or mother of the child, householder, or owner of the premises, manager or superintendent of public or private institutions in which the birth occurred to notify the local registrar, within 10 days after the birth, of the fact of such birth having occurred. It shall then in such case be the duty of the local registrar to secure the necessary information and signature to make a proper certificate of birth: *Provided*, That in cities the certificate of birth shall be filed at a less interval than 10 days after birth, if so required by municipal ordinance (or regulations) now in force or that may hereafter be enacted.

That stillborn children or those dead at birth shall be registered as births and also as deaths, and a certificate of both the birth and death shall be filed with the local registrar, in the usual form and manner, the certificate of birth to contain, in place of the name of the child, the word "Stillbirth." The medical certificate of the cause of death shall be signed by the attending physician, if any, and shall state the cause of death as "Stillborn." With the cause of the stillbirth, if known, whether a premature birth, and, if born prematurely, the period of uterine gestation, in months, if known; and a burial or removal permit in the usual form shall be required. Midwives shall not sign certificates of death for stillborn children, but such cases, and stillbirths occurring without attendance of either physician or midwife, shall be treated as deaths without medical attendance.

That each physician shall be entitled to be paid the sum of 10 cents for each birth certificate of a child born after this act goes into effect, properly and completely made out and registered with the local registrar of the district in which the birth occurred.

The local registrar shall certify to the State registrar the amount thus due each physician on the first day of each year. The State registrar shall then draw, by warrant, from the county treasurer of each county, the amount due the physician for said certificates in each county, provided said amount shall tally with the birth certificates

registered in the bureau of vital statistics, and shall immediately on receiving said moneys from said county treasurer pay said physician as provided in this section.

Any physician or person present at the birth of any child, or (if not present at the time of the birth of the child) who attends the case of any mother during her lying-in period, shall within 24 hours report said birth to the State registrar of vital statistics on a form supplied by the State registrar. This form shall contain the following information:

(1) Name of father and mother.

(2) Date of birth of the child, and such other information as the State board of health may require.

This report shall in no way supplant or relieve any responsibility for filing a certificate of the birth as provided for in this section. Any person failing to make the reports as provided in this section shall be liable to the penalties provided in section 14 of this act.

Sec. 7. That the certificates of birth shall contain the following items:

(1) Place of birth, including State, county, township, or town, village, or city. If in a city, the ward, street, and house number; if in a hospital or other institution, the name of same to be given, instead of the street and house number.

(2) Full name of child. If the child dies without a name, before the certificate is filed, enter the words "died unnamed." If the living child has not yet been named at the date of filing certificate of birth, the space for "full name of child" is to be left blank, to be filled out subsequently by a supplemental report, as hereinafter provided.

(3) Sex of child.

(4) Whether a twin, triplet, or other plural birth. A separate certificate shall be required for each child in case of plural birth, giving number of child in order of birth.

(5) Whether legitimate or illegitimate.

(6) Full name of father, except for illegitimate children.

(7) Residence of father.

(8) Color or race of father.

(9) Age of father at last birthday, in years.

(10) Birthplace of father; State or foreign country.

(11) Occupation of father.

(12) Maiden name of mother.

(13) Residence of mother.

(14) Color or race of mother.

(15) Age of mother at last birthday, in years.

(16) Birthplace of mother; State or foreign country.

(17) Occupation of mother.

(18) Number of child of this mother, and number of children of this mother now living.

(19) The certificate of attending physician or midwife as to attendance at birth, including statement of year, month, day, and hour of birth, and whether the child was alive or dead at birth. This certificate shall be signed by the attending physician or midwife, with date of signature and address; if there is no physician or midwife in attendance, then the father or mother of the child, household, or owner of the premises, or manager or superintendent of public or private institutions, or other competent person, whose duty it shall be to notify the local registrar of such birth.

(20) Exact date of filing in office of local registrar, attested by his official signature, and registered number of birth, as hereinafter provided.

All certificates of birth shall be written legibly, in unfading black ink; and no certificate shall be held to be complete and correct that does not supply all of the items of information called for herein, or satisfactorily account for their omission.

Sec. 8. That when any certificate of birth of a living child is presented without the statement of the given name, then the local registrar shall make out and deliver to the

parents of the child a special blank for the supplemental report of the given name of the child, which shall be filled out as directed and returned to the local registrar as soon as the child shall have been named, which in no case shall be later than 30 days from the birth of said child. That in case the parent does not comply with this section he shall be liable to the penalty prescribed in section 14 of this act.

SEC. 9. That every physician and midwife shall, without delay, register his or her name, address, and occupation with the local registrar of the district in which he or she resides, or may hereafter establish a residence; and shall thereupon be supplied by the local registrar with a copy of this act, together with such rules and regulations as may be prepared by the State registrar relative to its enforcement. Within 30 days after the close of each calendar year each local registrar shall make a return to the State registrar of all physicians, midwives, or undertakers who have been registered in his district during the whole or any part of the preceding calendar year; provided, that no fee or other compensation shall be charged by local registrars to physicians or midwives for registering their names under this section or making returns thereof to the State registrar.

SEC. 10. That the State registrar shall prepare, print, and supply to all registrars all blanks and forms used in registering, recording, and preserving the returns, or in otherwise carrying out the purposes of this act; and shall prepare and issue such detailed instructions as may be required to secure the uniform observance of its provisions and the maintenance of a perfect system of registration. And no other blanks shall be used than those supplied by the State registrar. He shall carefully examine the certificates received monthly from the local registrar, and if any such are incomplete or unsatisfactory he shall require such further information to be furnished as may be necessary to make the record complete and satisfactory. And all physicians, midwives, or informants connected with any case, and all other persons having knowledge of the facts, are hereby required to furnish such information as they may possess regarding any birth upon demand of the State registrar in person, by mail, or through the local registrar. He shall further arrange, bind, and permanently preserve the certificates in a systematic manner.

SEC. 11. That it shall be the duty of the local registrars to supply blank forms of certificates to such persons as require them. Each local registrar shall carefully examine each certificate of birth when presented for record to see that it has been made out in accordance with the provisions of this act and the instructions of the State registrar; and if any certificate of birth is incomplete or unsatisfactory, it shall be his duty to call attention to the defects in the return, and to see that they are corrected. If a certificate of birth is incomplete, he shall immediately notify the informant, and require him to supply the missing items if they can be obtained. He shall then number consecutively the certificates of births in two separate series, beginning with the "number one" for the first birth in each calendar year, and sign his name as registrar in attest of the date of filing in his office. He shall also make a complete and accurate copy of each birth certificate registered by him as directed by the State board of health, to be kept and permanently preserved in his office as the local record of such birth, in such manner as directed by the State registrar. And he shall, on the 10th day of each month, transmit to the State registrar all original certificates registered by him during the preceding month; and if no births occurred in any month, he shall, on the 10th day of the following month, report that fact to the State registrar on a card provided for this purpose.

SEC. 12. Each local registrar shall be required to make three correct copies of each birth certificate received that is properly and completely made out, one copy of which shall be kept by the local registrar making the same, one copy shall be forwarded to the State registrar of the State board of health, and one copy shall be forwarded to the recorder of deeds of the county in which the vital statistic registration district of said local registrar is located. For each copy of a birth certificate

properly and completely made out and forwarded to the said recorder of deeds the local registrar shall be paid the sum of 25 cents by the treasurer of the county in which the vital statistic registration district of said local registrar is located; provided, however, that the board of health of the city of Wilmington or the proper officer thereof shall be paid the sum of 25 cents for each copy of a birth certificate properly and completely made out and forwarded to the recorder of deeds in Newcastle County by the registrar of births, deaths, and marriages of the city of Wilmington. The deputy registrar and the subregistrar shall be paid the sum of 10 cents for each certificate received and returned by them as provided in section 4 of this act, and the said sum of 10 cents shall be deducted from the amount payable to the local registrar for forwarding the copy of the birth certificate to the recorder of deeds. All sums payable under the provisions of this section shall be paid quarterly by the treasurers of the several counties.

SEC. 13. The recorder of deeds of each county in Delaware shall be furnished with loose-leaf binders for births, into which he shall place in proper order the returns of births immediately on the receipt of same from the different local registrars of the county of which he is the recorder of deeds; said returns shall be made quarterly by the said local registrars. These binders shall be plainly marked "Register of births," and shall be part of his official records. All said registers shall at all times be accessible to physicians, clergymen, and lawyers without charge.

Each local registrar shall be furnished with loose-leaf binders similar to those furnished the recorder of deeds and shall file his quarterly copy in same manner as the recorders of deeds. The State registrar shall be furnished with loose-leaf binders and shall file the quarterly copies in same manner as the recorders of deeds.

SEC. 14. That the State registrar or recorder of deeds shall, upon request, furnish any applicant a certified copy of the record of any birth registered under provisions of this act, for the making and certification of which he shall be entitled to a fee of 50 cents, to be paid by the applicant. And the record or any such copy of the record of a birth, when properly certified by the State registrar or county recorder of deeds to be true copy thereof, shall be prima facie evidence in all courts and places of the facts therein stated. For any search of the files and records, when no certified copy is made, the State registrar or recorder of deeds shall be entitled to a fee of 50 cents for each hour or fractional part of an hour of time of search, to be paid by the applicant. And any local registrar or deputy registrar who shall neglect or fail to enforce the provisions of this act in his district or shall neglect or refuse to perform any of the duties imposed upon him by this act or by the instructions and directions of the State registrar, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than \$10 nor more than \$100.

And any person who shall willfully alter any certificate of birth, or the copy of any certificate of birth, on file in the office of the local registrar shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than \$10 nor more than \$100, or be imprisoned in the county jail not exceeding 60 days, or suffer both fine and imprisonment, in the discretion of the court.

And any other person or persons who shall violate any of the provisions of this act, or who shall willfully neglect or refuse to perform any duties imposed upon them by the provisions of this act, or shall furnish false information to a physician, midwife, or informant for the purpose of making incorrect certification of births shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than \$5 nor more than \$100.

SEC. 15. If any physician or midwife shall neglect or refuse to comply with the duties imposed on such person or persons by any part or parts of this act, he shall be fined not less than \$5 or more than \$25 for each and every case so neglected or refused, to be recovered before any justice of the peace. No penalties under this section to interfere with the specific penalties laid down in this act.

SEC. 16. That local registrars are hereby charged with the strict and thorough enforcement of the provisions of this act in their several districts, under the supervision and directions of the State registrar. And they shall make an immediate report to the State registrar of any violation of this law coming to their notice by observation or upon complaint of any person or otherwise. The State registrar is hereby charged with the thorough and efficient execution of the provisions of this act in every part of the State, and with supervisory power over local registrars, to the end that all of its requirements shall be uniformly complied with. He shall have authority to investigate cases of irregularity or violation of law, personally or by accredited representative, and all local registrars shall aid him, upon request, in such investigations. For any violation of this act or parts thereof the State registrar may bring action against the violator before any justice of the peace, and from his decision there shall be no appeal. When he shall deem it necessary he shall report cases of violation of any of the provisions of this act to the attorney general of Delaware with a statement of the facts and circumstances; and when any such case is reported to him by the State registrar the attorney general shall forthwith initiate and promptly follow up the necessary proceedings against the parties responsible for the alleged violations of law.

SEC. 17. That the sum of \$1,000 or such portion thereof as may be necessary to carry into effect the provisions of this act annually shall be appropriated for the carrying into effect the provisions of this act, and the same is hereby appropriated, out of any funds in the hands of the State treasurer not otherwise appropriated, and for the annual expenses of the same thereafter. The said appropriation shall be paid to the State board of health as other funds are paid to them, and said appropriation shall be known as vital statistics appropriation.

SEC. 18. That the State registrar shall furnish postal cards and stamped envelopes and such other stationery as may be necessary for the proper carrying into effect the provisions of this act. All such cards and envelopes shall be marked: "State board of health official business." Any person using such State property for any but official business shall, on conviction thereof, be fined not less than \$50 nor more than \$200.

The above-mentioned postal cards or stamped envelopes or stationery may be used for reporting any contagious or infectious diseases to the State registrar of vital statistics, or any official of the State board of health, or for any official business of said State registrar or State board of health, or to the same.

SEC. 19. No system for the registration of births shall be continued or maintained in any of the several municipalities of this State unless they are in harmony with the provisions of this act.

SEC. 20. That from the decision of the justice of the peace, under any of the provisions of this act, there shall be no appeal.

SEC. 21. The secretary of state is hereby authorized and directed to have 1,000 copies of this act printed and delivered to the State registrar within 60 days after the passage of this act.

SEC. 22. That any section or sections of this act, or part or parts of such, may be put into operation by the State board of health and have the force of law at any time before July 1, 1913.

That on July 1, 1913, every section of this act, except section 24, shall be in force.

SEC. 23. That all fines recovered under this act before any justice of the peace shall be paid to the registrar of vital statistics and by him to the treasurer of the State and applied to the general fund of the State.

That the costs in all cases shall be paid by the person fined.

SEC. 24. That on and after January 1, 1914, all yearly statistical reports shall begin on January 1.

SEC. 25. That all acts and parts of acts inconsistent with the provisions of this act or supplied by this act are hereby repealed.

Marriages—Registration of. (Act of Mar. 31, 1913.)

SECTION 1. That the State board of health of Delaware shall have charge of the registration of marriages; prepare the necessary methods, forms and blanks for obtaining and preserving such records and to insure the faithful registration of the same in the hundreds, cities, counties (with the recorder of deeds of each county), and in the central bureau of vital statistics of the State. The said board shall be charged with the uniform and thorough enforcement of the law throughout the State, and shall from time to time promulgate any additional forms and amendments that may be necessary for this purpose.

SEC. 2. That the secretary of the State board of health shall be the State registrar of vital statistics, and shall have general supervision over the central bureau of vital statistics, which is hereby authorized to be established by said board, and which shall be under the immediate direction of the said State registrar, and who shall be a medical practitioner of not less than 5 years' practice in his profession, and competent vital statistician. The State registrar of vital statistics shall receive an annual salary to be fixed by the State board of health, payable quarterly. The State board of health shall provide for such clerical and other assistants as may be necessary for the purpose of this act, who shall serve during the pleasure of the board, and may fix the compensation of persons thus employed within the amount appropriated therefor by the legislature. Suitable equipment shall be provided for the bureau of vital statistics, which shall be properly equipped with filing cases for the permanent and safe preservation of all official records made and returned under this act.

SEC. 3. That for the purposes of this act the State shall be divided into vital statistics registration districts by the State board of health; provided, however, that the city of Wilmington shall be one of the vital statistics registration districts of the State.

SEC. 4. The State board of health shall appoint a local registrar of vital statistics for each vital statistics registration district in the State and the State registrar shall approve of the deputy to act in case of the illness or absence of the local registrar; provided, however, that the State board of health shall appoint the registrar of births, deaths, and marriages of the city of Wilmington the local registrar of the vital statistics registration district of Wilmington as provided in section 3.

The term of office of local registrar appointed by said board and their deputies shall be for two years, beginning with the 1st day of May, 1913, and shall continue in office as such until removed or the election of a successor; provided, however, that the term of office of the local registrar of the vital statistics registration district of Wilmington shall commence and end with the term of office of the registrar of births, deaths, and marriages of the city of Wilmington.

Any local registrar appointed by said board or his deputy who fails or neglects to discharge efficiently the duties of his office as laid down in this act, or who fails to comply with the rules of the State board of health, or who fails to make prompt and complete returns of marriages as required hereby, shall be forthwith removed from his office by the State board of health, and his successor appointed, in addition to any other penalties that may be imposed for failure or neglect to perform his duty, under this act.

Each local registrar appointed by said board shall immediately upon his acceptance of appointment as such appoint a deputy, whose duty it shall be to act in his stead in case of absence, illness, or disability, said deputy registrar shall in writing accept such appointment, and shall be subject to all laws, rules, and regulations governing the action of local registrars. And when it may appear necessary for the convenience of the people in any district the local registrar is hereby authorized, with the approval of the State registrar, to appoint one or more suitable persons to act as local subregistrar, who shall be authorized to receive marriage certificates in and for such portions of the district as may be designated; and each local subregistrar shall note, over his signature, the date on which each certificate was filed, and shall forward all certificates to the local registrar of the district within 10 days after receiving the same, and in all cases before the third day of the following month; provided, that all subregis-

trars shall be subject to the supervision and control of the State registrar, and may be by him removed for neglect or failure to perform the rules and regulations of the State board of health and the State registrar, and they shall be liable to the same penalties for neglect of duties as the local registrar.

Every certificate of marriage shall be written legibly, in unfading black ink, and no certificate shall be held to be complete and correct that does not supply all of the items of information called for in this act, or satisfactorily account for their omission.

SEC. 5. That the State registrar shall prepare, print, and supply to all registrars all blanks and forms used in registering, recording, and preserving the returns, or in otherwise carrying out the purposes of this act; and shall prepare and issue such detailed instructions as may be required to secure the uniform observance of its provisions and the maintenance of a perfect system of registration. And no other blanks shall be used than those supplied by the State registrar. He shall carefully examine the certificates received from the local registrars, and if any such are incomplete and unsatisfactory he shall require such further information to be furnished as may be necessary to make the record complete and satisfactory. He shall further arrange, bind, and permanently preserve the certificates in a systematic manner.

SEC. 6. Each local registrar shall be required to make three correct copies of each marriage certificate received that is properly and completely made out, one copy of which shall be kept by the local registrar making the same, one copy shall be forwarded to the State registrar of the State board of health, and one copy shall be forwarded to the recorder of deeds of the county in which the vital statistic registration district of said local registrar is located. For each copy of a marriage certificate properly and completely made out and forwarded to the said recorder of deeds, the local registrar shall be paid the sum of 25 cents by the treasurer of the county in which the vital statistic registration district of said local registrar is located; provided, however, that the board of health of the city of Wilmington or the proper officer thereof shall be paid the sum of 25 cents for each copy of a marriage certificate properly and completely made out and forwarded to the recorder of deeds of Newcastle County by the registrar of births, deaths, and marriages of the city of Wilmington. The deputy registrar and the subregistrar shall be paid the sum of 10 cents for each certificate received and returned by them as provided in section 4 of this act, and the said sum of 10 cents shall be deducted from the amount payable to the local registrar for forwarding the copy of the marriage certificate to the recorder of deeds. All sums payable under the provisions of this section shall be paid quarterly by the treasurers of the several counties.

SEC. 7. The recorder of deeds of each county in Delaware shall be furnished with loose-leaf binders for marriages, into which he shall place in proper order the returns of marriages immediately on the receipt of same from the different local registrars of the county of which he is the recorder of deeds; said returns shall be made quarterly by the said local registrars. The binders shall be plainly marked: "Register of Marriages," and shall be part of his official records. All said registers shall at all times be accessible to physicians, clergymen, and lawyers without charge.

Each local registrar shall be furnished with loose-leaf binders similar to those furnished the recorder of deeds, and shall file his quarterly copy in same manner as the recorder of deeds. The State registrar shall be furnished with loose-leaf binders and shall file the quarterly copies in same manner as the recorders of deeds.

SEC. 8. That the State registrar or recorder of deeds shall, upon request, furnish any applicant a certified copy of the record of marriage registered under provisions of this act, for the making and certification of which he shall be entitled to a fee of 50 cents, to be paid by the applicant. And the record or any such copy of the record of a marriage, when properly certified by the State registrar or county recorder of deeds to be a true copy thereof, shall be prima facie evidence in all courts and places of the facts therein stated. For any search of the files and records, when no certified copy is made, the State registrar or recorder of deeds shall be entitled to a fee of 50 cents for each hour or fractional part of an hour of time of search, to be paid by the applicant.

SEC. 9. And any local registrar or deputy registrar who shall neglect or fail to enforce the provisions of this act in his district, or shall neglect or refuse to perform any of the duties imposed upon him by this act or by the instructions and directions of the State registrar, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than \$10 nor more than \$100.

And any person who shall willfully alter any certificate of marriage, or the copy of any certificate of marriage, on file in the office of the local registrar shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than \$10 nor more than \$100, or be imprisoned in the county jail not exceeding 60 days, or suffer both fine and imprisonment, in the discretion of the court. And any other persons or persons who shall violate any of the provisions of this act, or who shall willfully neglect or refuse to perform any duties imposed upon them by the provisions of this act, or shall furnish false information for the purpose of making incorrect certification of marriage shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than \$5 nor more than \$100.

SEC. 10. It shall be the duty of any person, and of the clerk or keeper of the records of any religious society by or before whom any marriage or marriages may hereafter be solemnized or contracted, to make full and complete return of the same, on blanks furnished by the State registrar of vital statistics, on or before the last day of the month in which said marriage or marriages were solemnized or contracted, to return the certificate or certificates of such marriage or marriages to the local registrar of the district in which said marriage or marriages were solemnized or contracted. A separate form shall be used for each marriage reported. All such certificates shall be filed according to their dates.

That for each marriage certificate properly and completely made out and registered with the local registrar or local subregistrar of the district in which the marriage occurred the maker thereof shall receive the sum of 10 cents. The local registrar shall certify to the State registrar the amount thus due each person on the first day of each year. The State registrar shall then draw by warrant from the county treasurer of each county the amount due each person for said certificates in each county, provided said amount shall tally with the marriage certificates registered in the bureau of vital statistics, and shall immediately on receiving said moneys from said county treasurer pay said persons as provided in this section. Any person or clerk of record, as in this section hereinbefore designated, shall within 24 hours report said marriage to the State registrar of vital statistics on a form supplied by the State registrar. This form shall contain the following information: Name of groom, residence of groom, name of bride, residence of bride, date of marriage, place of marriage, name of person or clerk solemnizing marriage.

This report shall in no way supplant or relieve any responsibility for filing a certificate of the marriage as provided for in this act. Any person or clerk failing to make a report as herein provided shall be liable to the penalties provided in section 14 of this act.

SEC. 11. If any person or clerk of any society, by or before whom marriages may be solemnized, shall neglect or refuse to comply with the duties imposed on such person or persons, by any part or parts of this act, he shall be fined not less than \$5 or more than \$25 for each and every case so neglected or refused; to be recovered before any justice of the peace. No penalties under this section to interfere with the specific penalties laid down in section 14 of this act.

SEC. 12. It shall be the duty of the clergymen, or ministers of religion of all denominations, and all clerks or keepers of records of societies, and all other persons, by or before whom any marriage may hereafter be solemnized, or contracted, on or before the 1st day of July, 1913, and hereafter of all such persons as may occupy the positions herein mentioned in this State, to report his, or her, or their name or names, their occupations and places of residence, to the State registrar of vital statistics to have the same alphabetically registered in a suitable book to be by him provided for the purpose. In the event of any of the persons above specified removing to any

other place of residence within the State, it shall be the duty of such person to notify the State registrar of vital statistics of the fact within 30 days after such removal; and if any person as above mentioned shall neglect or refuse to comply with the requirements of this section, he shall be fined not less than \$5, nor more than \$10; to be recovered as provided in section 16.

SEC. 13. That all marriages in the State shall be immediately registered in the districts in which they occur, as provided by this act. It shall be the duty of any person, and of the clerk or keeper of the records of any religious society, by or before whom any marriage or marriages may hereafter be solemnized or contracted, to make full and complete return of the same, on blanks furnished by the State registrar of vital statistics, on or before the last day of the month in which said marriage or marriages were solemnized or contracted, to return the certificate or certificates of such marriage or marriages to the local registrar of the district in which said marriage or marriages were solemnized or contracted. Said certificate shall contain:

- (1) Date of this marriage.
- (2) Full name of groom.
- (3) Groom's present residence.
- (4) Age of groom.
- (5) Race of groom.
- (6) Occupation of groom.
- (7) Nativity of groom.
- (8) Is groom single, married, or divorced.
- (9) Name of groom's father and his nativity.
- (10) Maiden name of groom's mother and her nativity.
- (11) Number of groom's marriage.
- (12) Full name of bride.
- (13) Bride's present residence.
- (14) Age of bride.
- (15) Race of bride.
- (16) Nativity of bride.
- (17) Is bride single, widowed, or divorced.
- (18) Bride's maiden name if widowed or divorced.
- (19) Name of bride's father and his nativity.
- (20) Name of bride's mother and her nativity.
- (21) Number of bride's marriage.
- (22) Name of person performing ceremony.
- (23) Residence of person performing ceremony.
- (24) Occupation, and if a clergyman, religious denomination of person performing ceremony.
- (25) Name and residence of witness or witnesses (not more than three) to the marriage.

All returns shall be made on forms furnished by the State registrar. A separate form shall be used for each marriage reported. All such certificates shall be filed according to their dates.

SEC. 14. If any clergyman, or person, or clerk of any society by or before whom marriages may be solemnized shall neglect or refuse to comply with the duties imposed on such person or persons by any part or parts of this act, shall be fined not less than \$5 or more than \$25 for each and every case so neglected or refused, to be recovered before any justice of the peace. No penalties under this section to interfere with the specific penalties laid down in section 16 or any other section of this act.

SEC. 15. That any clerk of the peace or magistrate issuing a marriage license shall, within 24 hours, notify the State registrar of vital statistics of such fact on a form supplied by the State registrar of vital statistics. This form shall contain the following information: (1) Name of groom, (2) residence of groom, (3) name of bride, (4) residence of bride, (5) date of issuing said license, (6) name of person issuing said license.

That any clerk of the peace or magistrate violating any provisions of this section shall be fined as provided for in this act.

SEC. 16. That local registrars are hereby charged with the strict and thorough enforcement of the provisions of this act in their several districts, under the supervision and direction of the State registrar. And they shall make an immediate report to the State registrar of any violation of this law coming to their notice by observation or upon complaint of any person, or otherwise. The State registrar is hereby charged with the thorough and efficient execution of the provisions of this act in every part of the State, and with supervisory power over local registrars, to the end that all of its requirements shall be uniformly complied with. He shall have authority to investigate cases of irregularity or violation of law, personally or by accredited representative, and all local registrars shall aid him, upon request, in such registration. For any violation of this act or parts thereof the State registrar may bring action against the violator before any justice of the peace and from his decision there shall be no appeal. When he shall deem it necessary, he shall report cases of violation of any of the provisions of this act to the attorney general of Delaware, with a statement of the facts and circumstances; and when any such case is reported to him by the State registrar, the attorney general shall forthwith initiate and promptly follow up the necessary proceedings against the parties responsible for the alleged violations of law.

SEC. 17. That the sum of \$1,000, or such portion thereof as may be necessary to carry into effect the provisions of this act, annually shall be appropriated for the carrying into effect the provisions of this act, and the same is hereby appropriated out of any funds in the hands of the State treasurer not otherwise appropriated, and for the annual expenses of the same thereafter. The said appropriation shall be paid to the State board of health as other funds are paid to them, and said appropriation shall be known as vital statistics appropriation.

SEC. 18. That the State registrar shall furnish postal cards and stamped envelopes, and such other stationery as may be necessary for the proper carrying into effect the provisions of this act. All such cards and envelopes shall be marked: "State board of health, official business." Any person using such State property for any but official business shall, on conviction thereof, be fined not less than \$50 nor more than \$200.

The above-mentioned postal cards or stamped envelopes or stationery may be used for reporting any contagious or infectious diseases to the State registrar of vital statistics or any official of the State board of health, or for any official business of said State registrar or State board of health, or to the same.

SEC. 19. No system for the registration of marriages shall be continued or maintained in any of the several municipalities of this State, unless they are in harmony with the provisions of this act.

SEC. 20. That from the decision of the justice of the peace, under any of the provisions of this act, there shall be no appeal.

SEC. 21. The secretary of state is hereby authorized and directed to have 1,000 copies of this act printed and delivered to the State registrar, within 60 days after the passage of this act.

SEC. 22. That any section or sections of this act, or part or parts of such, may be put into operation by the State board of health and have the force of law, at any time before July 1, 1913.

That on July 1, 1913, every section of this act shall be in force.

SEC. 23. That all fines recovered under this act before any justice of the peace shall be paid to the treasurer of the State and applied to the general fund of the State.

That the costs in all cases shall be paid by the person fined.

SEC. 24. That on and after January 1, 1914, all yearly statistical reports shall begin on January 1.

SEC. 25. That all acts and parts of acts, inconsistent with the provisions of this act or supplied by this act, are hereby repealed.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

PASADENA, CAL.

Milk and Milk Products—Inspection by Veterinarian. (Ord. 1198, Feb. 13, 1912.)

SECTION 1. That section 3 of ordinance No. 674 be, and the same hereby is, amended so as to read as follows:

"Sec. 3. He shall perform the following duties:

"He shall apply the tuberculin test as laid down by the United States Bureau of Animal Industry, free of cost, to all cows from which it is proposed to furnish milk or cream to the inhabitants of this city; he shall tag in the right ear with a numbered tag to be furnished by said city all cows tested by him that do not show reaction after application of the tuberculin test, and mark with a letter 'T' punched in the right ear all cows showing reaction; he shall examine cows, dairies, and premises from which it is proposed to supply milk or cream to the inhabitants of this city, and shall issue certificates of health to applicants for licenses; he shall examine all cows as to their condition of health, and shall be diligent in searching out sick or diseased cows, and shall have the power and it shall be his duty to order the removal from a herd of cows from which milk or cream is supplied to the inhabitants of this city cows that are diseased or in unfit condition to supply milk for human consumption. He shall make such examination of the milk or cream as directed by the health officer; he shall attend professionally the homes of the street and fire departments and all the live stock at the city farm; he shall have the power at all times to take samples of milk or cream for the purpose of examination; he shall make a detailed report to the health officer of each test made, showing the number of ear tag, the record of each temperature, and time of taking the same, and the result of the test and the condition of the dairy milk-house utensils, corrals, etc.; he shall also make a report once a month to the board of health showing number of tests made by him, number of diseased cattle found, number removed from herd on account of sickness or disease, number of visits made, and such other data as requested by the health officer.

"He shall apply the tuberculin test to cows from which milk or cream is supplied to the inhabitants of this city as often as his judgment may dictate or as directed by the health officer, and shall visit and inspect every dairy having five or more cows at least once a month and other dairies as directed by the health officer.

"He shall see that the provision of ordinance No. 765 and the ordinances amendatory thereto are carried out at all times in so far as the same relate to the duties of his said office."

SEC. 2. That section 4 of ordinance No. 674 as amended by section 16 of ordinance No. 1140 be, and the same hereby is, amended so as to read as follows:

"SEC. 4. The salary of the city veterinarian shall be, and the same is hereby, fixed at \$150 per month. He shall devote his entire time to the duties of his office, subject to the provisions of ordinance No. 1140. He shall be, and he is hereby, allowed in addition to his salary, as herein provided, the sum of \$25 per month toward the expense of maintaining and operating an automobile for use in performing the duties of said office."

SEC. 3. This ordinance shall go into effect at 12 o'clock noon on the 1st day of March, 1912.

Hospitals and Sanatoria—Permit Required. (Ord. 1229, June 25, 1912.)

SECTION 1. It shall be unlawful for any person, firm, or corporation as principal, agent, officer, servant, or employee to establish, conduct, or maintain in the city of Pasadena any hospital, sanatorium, or other place (not prohibited by section 373 of the Penal Code) for the reception, care, or treatment of any sick or diseased person, without having first obtained a permit therefor in writing from the board of health of said city.

SEC. 2. The board of health shall have power to issue permits for such hospitals, sanatoriums, or other places, and every such permit shall specify the name and residence of the person, firm, or corporation conducting the same and the street and street number where the same is located and shall be revocable for cause by said board of health in any case where the provisions of this ordinance are violated or in any case where in the judgment of said board of health such hospital, sanatorium, or other place is being managed, maintained, or conducted without due regard to the health, comfort, or morality of the inmates thereof and other persons who may be affected thereby, or without due regard to its proper sanitary or hygienic arrangements and appliances. Under no circumstances shall any such permit be issued by the board of health for any hospital or sanatorium which shall not be properly connected with a sewer, and which shall not have in use a properly equipped incinerator (for the destruction of refuse matter other than garbage) of a type approved by the board of health and which shall not have at least one isolation room which shall be used exclusively for isolating patients affected or thought to be affected with any contagious or infectious disease.

SEC. 3. It shall be lawful for the officers and representatives of the board of health at all reasonable times to enter and inspect such hospitals, sanatoriums, or other places.

SEC. 4. Any person, firm, or corporation who shall violate the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not to exceed \$300 or by imprisonment in the city jail for a term not to exceed 30 days or by both such fine and imprisonment.

Poliomyelitis—Placarding—Quarantine. (Ord. 1251, Aug. 13, 1912.)

SECTION 1. That ordinance No. 486 of the city of Pasadena be amended by adding thereto a new section, to be numbered VII (a), and to read as follows:

"**SEC. VII (a).** Whenever any person affected with anterior poliomyelitis, or infantile paralysis, is reported to the health office, the health officer, upon proving the existence of the disease, shall cause to be posted in a conspicuous place on the house or place occupied by such person a white card printed with black and yellow ink setting forth the fact, said card to remain 30 days or longer, and until after the premises have been thoroughly disinfected under the supervision of the health officer."

SEC. 2. That ordinance No. 486 of the city of Pasadena be amended by adding thereto a new section, to be known as No. XII (a), and to read as follows:

"**SEC. XII (a).** Whenever the prevalence in the community of a contagious or infectious disease shall in the opinion of the board of health necessitate such action, the said board may in its discretion order that all children of or under the age of 12 years shall be excluded from all public gatherings, playgrounds, and places of amusement, instruction, or entertainment."

PEORIA, ILL.**Garbage and Offensive Matter—Care and Disposal of. (Ord. July 30, 1912.)**

SECTION 1. Between the 1st day of May and the 1st day of November of each year no person or corporation shall load, carry, or transport any garbage, offal, swill, rubbish, manure, or other offensive or nauseous substance in any cart or vehicle in or through that section of the city of Peoria bounded by the following limits: Beginning at the Illinois River at the foot of Bridge Street, thence up Bridge Street to Franklin

Street, thence along Franklin Street to Perry Avenue, thence along Perry Avenue to Fayette Street, thence along Fayette Street to the Illinois River, thence along the Illinois River to the place of beginning, except between the hours of 7 p. m. and 8 a. m., nor shall they drive any empty cart or vehicle used for collecting and carrying above-named substances through any part of said section of the city except between the hours of 7 p. m. and 8 a. m. Permission, however, is hereby given, at all hours of the day, to drive vehicles loaded in the remainder of the city with above substances down Washington Street and Franklin Street to Bridge Street and down Bridge Street to the river, and to drive their empty vehicles returning the same way.

SEC. 2. The producers of garbage, offal, and swill who are located in that part of the city described in section 1 shall provide water-tight metal receptacles holding not to exceed 15 gallons and with close-fitting covers, in which they shall deposit and store their garbage and other said substances, until removed by garbage collectors. The said receptacles shall be placed in the alley where at all possible; otherwise they shall be placed on the sidewalk in front of the premises of the producer at the curb line, but said receptacles shall not be allowed to remain upon said alley or sidewalk between the hours of 8 p. m. and 7 p. m., and said receptacles must be frequently disinfected by the producer so as not to emit any objectionable odor.

SEC. 3. Any person or corporation who shall violate any of the provisions of section 1 or section 2 of this ordinance shall be fined not less than \$5 nor more than \$200 for each offense.

SEC. 4. All ordinances or parts of ordinances in conflict with this ordinance, except any ordinance now in force relative to the collection and disposal of night soil, be, and the same are hereby, repealed.

SEC. 5. This ordinance shall be in full force and effect from and after its passage and due publication according to law.

PLAINFIELD, N. J.

Stables and Disposal of Manure. (Art. 5, Sanitary Code, Bd. of H., Sept. 6, 1912.)

SECTION 1. Every owner, agent, lessee, tenant, or occupant of any stable, stall, or apartment in which any horse or any other cattle shall be kept, or any place in which any manure or any solid or liquid discharge or excrement may collect or accumulate, shall at all times keep or cause to be kept such stables, stalls, or apartments and the drainage yard and appurtenances thereof in a clean, healthful, and wholesome condition. In all cases in which this board shall by written notice so require, all manure or excrement shall be removed from all stables and premises where it may accumulate, as often as once a week.

SEC. 2. Every stable or apartment in which any horse or any other cattle shall be kept shall be provided with a properly covered manure vault, or water-tight bin, of sufficient capacity to care for all manure which may accumulate in said stable or apartment, or on said premises; said vault or bin shall be made fly proof and shall be properly ventilated. Manure shall not be allowed to accumulate except as provided above, without a written permit from this board of health.

SEC. 3. Between the 1st day of May and the 1st day of October in each year manure used for fertilizing purposes or otherwise shall not be conveyed through the streets, shipped, nor received in the city of Plainfield without a written permit from this board of health, nor shall any such manure be conveyed through the streets of this city at any time unless the same is adequately covered by tarpaulin or other suitable covering.

SEC. 4. Any person or persons or corporation offending against any of the provisions of this article shall, on conviction thereof, forfeit and pay a penalty of \$10 for the first offense and for each subsequent offense the sum of \$25.

PIQUA, OHIO.

Milk—Production, Care, and Sale. (Ord., Apr. 1, 1912.)

Permits.—No one shall engage in the sale of milk or cream in the city of Piqua, Ohio, ship the same into the city for sale, or supply to others for use in the city unless he shall first obtain a permit from the board of health so to do.

A fee of 50 cents will be charged for each permit, and the same shall be credited to the sanitary fund. Permits shall be renewed every six months.

On or before the 1st day of January and the 1st day of July of each year hereafter permits will be issued by the board of health or health officer for the ensuing half-year to all applicants who comply with the provisions of these rules and regulations regulating the sale of milk or cream in the city of Piqua, but before the issuance of any permit every vender or shipper of milk or cream shall make application therefor upon a printed form provided by the board for the purpose, on which shall be stated:

1. The name, residence, post-office address, and location of the business place or places of the applicant.

2. The number of cows from which milk is obtained for sale and the kind of food which the cows are given.

3. If the applicant buys part or all his milk supply, the names and addresses of all persons from whom he obtains milk or cream.

4. If the applicant be a shipper of milk or cream into the city, he shall, in addition to the above, state the route of his shipments.

If any person engage in the sale of milk or cream after the said 1st day of January or July in any year, he shall forthwith make application for a permit for the remainder of the half year, complying with the above regulations.

The board or health officer will not issue any permit unless they are satisfied with the cleanly and sanitary condition of the stables, cows, wagons, store, or place of business of the applicant therefor, and with all the utensils used by him from which his milk or cream is obtained; and that the food given the cows is pure and wholesome, and that all persons engaged in the care and handling of the milk are free from any contagious diseases, and that said persons use due cleanliness in their work.

All applications for permits shall be signed by the applicant. The permit fee shall accompany the application.

If, after issuing a permit to sell milk or cream, the board of health or health officer shall become satisfied that the provisions of this subdivision of the sanitary code are being violated, they will at once revoke the permit issued to such person or persons, and no new permit will be issued until all insanitary conditions have been rectified, and all other provisions of this subdivision of the sanitary code are complied with.

Quality of milk.—No person shall bring into the city for sale or shall sell or offer for sale any milk:

- (a) Containing more than 88 per cent of water or fluids.
- (b) Containing less than 12 per cent of milk solids.
- (c) Containing less than 3 per cent of milk fats.
- (d) From which any part of the cream has been removed.
- (e) Having a specific gravity of less than 1.029.
- (f) Containing any dirt, foreign matter, or sediment.
- (g) Containing any boracic or salicylic acid, formaldehyde, or other foreign chemicals.
- (h) Containing any pathogenic bacteria.
- (i) Containing bacteria of any kind, more than 500,000 per cubic centimeter.
- (j) Drawn from any cow having a communicable disease or showing clinical symptoms of tuberculosis, or from a herd which contains any diseased cattle or are afflicted with or exposed to any communicable disease.

(k) Drawn from any cow which has been fed on garbage, refuse, swill, moist distillery waste, or other improper food.

(l) Which has existed or has been kept under conditions contrary to the provisions of this code.

(m) No milk shall be kept, sold, offered for sale, or drawn from cows suffering with sore and inflamed udders and teats, or from cows diseased.

(n) Drawn from any cow within 15 days before or 9 days after parturition.

(o) No milk in partially filled bottles shall be sold or offered for sale, and no bottles shall be filled, capped, or recapped outside of the dairy building, regularly used for this purpose.

Provided that the subdivisions *a*, *b*, *c*, and *d* shall not apply to milk sold under the title of "skimmed milk."

Retailers.—All grocers, bakers, or other persons having or offering for sale milk or cream shall at all times keep the names and addresses of the dairymen from whom the milk on sale was obtained posted up in a conspicuous place wherever such milk may be sold or offered for sale. If skimmed milk or pasteurized milk is kept or offered for sale, each and every container of such milk shall be plainly marked with the words "skimmed milk" or "pasteurized milk."

No person shall bring into the city for sale, or sell, or offer for sale, milk from which the cream has been removed, either in part or in whole, unless plainly marked on the container "skimmed milk."

Milk tickets.—If dairymen, or other persons, offering milk for sale use tickets as representatives of value, these tickets must be in coupon form and must be destroyed after once using.

The stable and surroundings.—The stables shall be so constructed that the cows have plenty of air space and light and should be painted in some light color or white-washed twice a year. The stables must be kept free from dirt, dust, cobwebs, and odor, and the ceiling must be dust tight. If horses are kept in the same stable a tight partition should separate them from the cattle. No other animals or fowl should be allowed in the cow stable. Floors must be laid not less than 1 foot higher than outside surface level, so that good drainage can be procured. Floors must be constructed of asphalt, concrete, or brick, with surface flushed with cement, or of wood water tight. They must be kept in good repair at all times and constructed with a 4-foot walk back of the cow. At least 4 square feet of unobstructed window glass or muslin must be provided per cow and equally distributed.

The urine and manure shall be twice daily removed from the stable and must be moved at least 30 feet from the stable and placed where cows can not get into it. Manure must not be thrown out of stable windows. The bedding shall be kept sweet and clean, the food and water ample and well chosen. No dairyman shall feed his cows on swill, garbage, or other like substances. If malt is used it must not be fed when sour. The surroundings to the stable must be kept in a sanitary condition. Cows must not be allowed to stand in manure and filth. Cows must be kept clean. Manure, litter, etc., must not be allowed to become caked or dried on them.

The milkers.—The milkers must thoroughly wash and wipe their hands and the cows' udders before they begin milking. Their outer garments must be clean. They must not use pails, cans, strainers, etc., unless they have been thoroughly washed in hot water and soap, or hot water and soda and afterward sterilized with boiling water or steam. Care must be taken that the seams of the vessels are thoroughly cleaned with a brush. They must refrain from milking or handling milk in any way when in themselves or their families there is even a suspicion of any contagious or infectious disease, such as smallpox, scarlet fever, diphtheria, typhoid fever, tuberculosis, or the like.

Handling the milk.—Immediately after milking, the milk shall be removed from the stable into a milkroom screened from flies and other insects, aerated and cooled

to at least 50 degrees temperature, and put into perfectly clean bottles or cans. The milk house or milk room must be located at least 15 feet from any other building and at all times shall be kept in a clean and sanitary condition. Dairymen who use both bottles and cans in delivering milk shall not fill bottles while on their delivery route. All milk and cream sold in the city shall be delivered with a temperature not to exceed 55° F.

Care of cans or bottles.—All cans or bottles used in the distribution of milk must be thoroughly cleaned, either by hot water and soap or hot water and soda, or other alkalies, rinsed and sterilized by boiling water or steam before they are again used as receptacles for milk. Extreme care must be exercised in cleaning the faucets to cans by use of a brush. No person shall use a milk bottle for other than milk purposes.

Contagious diseases.—Should scarlet fever, smallpox, diphtheria, typhoid fever, tuberculosis, or other dangerous or infectious diseases occur in the family of any dairyman or among any of his employees, or in any house in which milk is kept for sale, or in the family or among the employees of any person who ships milk into the city for sale, such dairyman, such venders or shippers of milk shall immediately notify the health officer who shall at once investigate and order the sale of such milk stopped or sold under such regulations as he thinks proper.

Should dairymen, venders, or shippers of milk fail to notify the health officer when contagious diseases exist in their families or in the families of their employees, or who, after such information is given the health officer, fail to obey his directions, the milk and dairy inspector or health officer shall seize and destroy all milk sent into the city by such persons, and he shall, when acting in good faith, be held harmless in damages therefor in any suit or demands made.

In delivering milk to families in which there exists any of the above-named contagious or infectious diseases, the dairyman shall not enter, neither shall he permit any of his milk bottles or vessels to be taken into such houses, but shall pour such milk as each family wishes into vessels furnished by such family.

Adulterations.—No person shall offer for sale any milk that is impure, adulterated, or unwholesome.

Milk delivery wagons.—No one shall use any vehicle for the delivery of milk in the city of Piqua which has not painted thereon in legible roman letters not less than 3 inches in height, and on both sides of the vehicle in a conspicuous place, the name and location of his dairy and the number of his permit, and if such vender sells skimmed milk, each and every container of skimmed milk shall have the words "Skimmed Milk" thereon in plain letters not less than 1 inch in height.

The milk delivery wagons shall be kept at all times in a cleanly condition, and free from any substance liable to contaminate or injure the purity of the milk.

Certificate of veterinarian.—The board may require a certificate from a licensed veterinarian, showing the cows furnishing milk brought for sale within its jurisdiction are free from tuberculosis or other dangerous disease.

Milk inspectors.—The milk or dairy inspector, the health officer, or any other person authorized by the board of health, may examine all dairy herds, utensils for handling milk of all dairymen or other persons engaged in selling or shipping for sale milk or cream to the city of Piqua. These inspectors or health officer shall have power to open any can, vessel, or package containing milk or cream, whether sealed (locked) or otherwise, or whether in transit or otherwise, and take samples of the milk or cream for testing or analysis; and if, upon inspection, the milk or cream is found to be filthy, or the cans or other containers are in an unclean condition, the said inspector or health officer may then and there condemn the milk or cream as deemed by him to be filthy and pour the contents of such bottles, vessels, or packages upon the ground forthwith, and he shall, if done in good faith, be held harmless in damages therefor, in any suit or demand made.

All rules and regulations of the board of health in conflict with the provisions of the foregoing rules and regulations be, and the same are hereby, repealed.

Penalty for violation.—Whoever violates any provision of this subdivision of the Sanitary Code of the city of Piqua shall be fined in any sum not exceeding \$100, or imprisoned for any time not exceeding 90 days, or both; but no person shall be imprisoned under this section for the first offense, and the prosecution shall always be for such first offense, unless the affidavit upon which the prosecution is instituted contains the allegation that the offense is a second or repeated offense. (Sec. 2119, O. L., v. 85, p. 424.)

Milk—Care and Sale of. (Reg. Bd. of H., Dec. 2, 1912.)

SECTION 1. That it shall be unlawful for any person, firm, or corporation to sell, exchange, or deliver, or have in his custody or possession with intent to sell or exchange, or expose or offer for sale or exchange, any milk in the city of Piqua, State of Ohio, without first having complied with the following provisions, to wit:

SEC. 2. Milk, how sold.—No person, firm, or corporation, except such as may sell for consumption on the premises where sold, shall sell, offer for sale, expose for sale, or keep with intention of selling any milk or cream in the city of Piqua, Ohio, unless such milk or cream is kept, offered for sale, exposed for sale, or sold in sanitary bottles, tightly closed and capped, or receptacles of similar character which may be approved by the board of health of said city; and owners and operators of dairies and all drivers of wagons who sell milk or cream at retail or deliver the same from wagons shall carry, sell, and deliver such milk or cream only in bottles or other approved receptacles as aforesaid. All milk or cream so sold in bottles or other receptacles, not to be consumed on the premises where sold, shall be taken and carried to the residence of the purchaser or place where intended for use in said bottles or receptacles, and not otherwise.

SEC. 3. Equipment required for sales.—No milk or cream shall be sold, offered for sale, exposed for sale, or kept with the intention of selling in or at any milk depot, creamery, store, or other place of business, unless such milk depot, creamery, store, or other place of business shall be properly equipped for keeping said milk or cream, and the same shall be kept therein at a temperature of 50° or lower, Fahrenheit.

SEC. 4. Wholesalers and bona fide dealers' exceptions.—The provisions of section 2 of this regulation shall not apply to bona fide dealers in milk or cream at wholesale who shall sell at any one time a quantity of not less than 1 gallon of milk, or 2 quarts of cream, and who shall each have a separate place in which said milk and cream shall be kept or offered for sale, with suitable ventilation, and provided also with a room in which shall be washed and cleaned all cans, bottles, or other receptacles and utensils of every kind used in connection with said business, all of which shall be subject to the approval of the board of health.

SEC. 5. No person or persons shall transfer any milk intended for sale from one can, bottle, or receptacle into another can, bottle, or receptacle on any street, alley, or thoroughfare, or upon a delivery wagon or other vehicle, or in any exposed place in the city of Piqua, Ohio.

SEC. 6. Penalty.—Whoever violates any section of the foregoing order and regulation shall be fined any sum not exceeding one hundred (\$100) dollars or imprisoned for any time not exceeding 90 days, or both, but no person shall be imprisoned hereunder for the first offense.

This regulation shall take effect and be in force on and after May 1, 1913.

Foodstuffs—Protection of. (Reg. Bd. of H., Apr. 1, 1912.)

SECTION I. Every person engaged in the business of selling articles of food—including berries of all kinds—breadstuffs, cake, pastry, candy, confectionery, or dried fruits, for human consumption, in the city.

(1) When such foodstuffs are exposed for sale outside of any inclosed building, shall keep such foodstuffs free from dust, dirt, and flies, by the use of glass vases, or other equally efficient means; and

(2) When such foodstuffs are exposed for sale in an inclosed building, shall protect said foodstuffs from being handled by the public by the means of wire guards, or other sufficient contrivance, and from dust, dirt, and flies, by means of glass cases, mosquito netting, or other like means: *Provided, however*, That all fruits, except berries of all kinds, and vegetables in whole or in their native state, are exempt from the provisions of this section.

SEC. II. No person shall sell or offer to sell, or have in his possession with intent to sell, any unripe, overripe, decayed, or damaged fruit or vegetables, nor any meat, fish, game, or poultry, that is diseased, unsound, unwholesome, or which for any reason is unfit for human food.

SEC. III. No person shall sell or offer for sale, any butter or cheese, except the same be covered so as to protect it thoroughly from dust, dirt, and flies.

SEC. IV. Any article of food sold or offered for sale for human consumption, shall be wrapped in clean manila wrapping paper, or other clean material, or placed in a clean receptacle, and the use of newspapers or other printed or soiled papers for such purpose, is hereby prohibited.

SEC. V. Every dealer in meats shall keep clean and in a sanitary condition every article used for the transportation of meats within the city, and dressed meats of any kind whatever shall not be conveyed through the streets in an uncovered condition.

SEC. VI. No person shall keep for sale, or sell, or offer for sale, fruits and berries in old or dirty boxes; berries and fruits shall be packed in new clean boxes.

SEC. VII. No person shall deposit or allow to remain within 2 feet of the surface of any sidewalk, street, or alley, or other public place in the city of Piqua, any article of food offered for sale for human consumption, unless the same shall be contained in boxes or other receptacles, so as to be protected from dogs and other animals and their excretions.

SEC. VIII. All rules and regulations of the board of health in conflict with the provisions of the foregoing rules and regulations be and the same are hereby repealed.

SEC. IX. Any violation of any of the foregoing rules shall be punished by a fine not exceeding \$100, or by imprisonment for any time, not exceeding 90 days, or both; but no person shall be imprisoned for any violation or failure to obey any of the foregoing rules for the first offense, unless the affidavit upon which the prosecution is instituted contains the allegation that the offense is a second or repeated offense.

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